Appendix A

Document Support Information

Appendix A
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Appendix A.1

References

Appendix A
Document Support Information

References

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Chapter 4. Alternatives Analysis

No references.

Appendix A.2

List of Preparers

List of Preparers

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Appendix A.3

List of Recipients

List of Recipients

Federal Agencies

Advisory Council on Historic Preservation

Federal Emergency Management Agency

Federal Railroad Administration

National Marine Fisheries Service

National Park Service

U.S. Army Corps of Engineers

U.S. Department of Fish and Wildlife Service

U.S. Department of the Interior

U.S. Environmental Protection Agency (Region 10)

Tribes

Confederated Tribes and Bands of the Yakama Indian Nation

Duwamish Tribe

Muckleshoot Indian Tribe

Snohomish Tribe

Snoqualmie Indian Tribe

Suquamish Tribe

Tulalip Tribes of Washington

State Agencies

Washington State Department of Archaeology and Historic Preservation

Washington State Department of Ecology

Washington State Department of Fish and Wildlife

Washington State Department of Natural Resources

Washington State Department of Social and Health Services

Washington State Department of Transportation

Regional Agencies

Puget Sound Clean Air Agency

Puget Sound Regional Council

County Agencies

King County

Snohomish County

Transit Agencies

Community Transit

King County Metro Transit

Local Agencies

City of Bellevue

City of Edmonds

City of Issaquah

City of Lynnwood

City of Mountlake Terrace

City of Redmond

City of Seattle

City of Shoreline

Libraries

Bellevue Library

Lynnwood Library

Washington State Library

Schools and Community Centers

Bellevue Highline Community Center

Edmonds School District

Lynnwood Community Center

Utility Providers

Allstream

Black Rock Cable

CenturyLink

Comcast

Frontier

Integra

King County Waste Water

Olympic (British Petroleum)

Puget Sound Energy

Snohomish County Public Utility District

Verizon

Community Organizations

Bridle Trails Community Club

Appendix A.4

Acronyms

Acronyms and Abbreviations

APE	Area of Potential Effects
BCC	Bellevue City Code
BMPs	best management practice
BR-GC	Bel-Red General Commercial
BR-MO	Bel-Red Medical Office
BR-OR-1	Bel-Red Office/Residential Node 1
BR-OR-2	Bel-Red Office/Residential Node 2
BR-R	Bel-Red Residential
BTP	Business/Technical Park
Btu	British thermal units
CAA	Clean Air Act
CAO	Critical Area Ordinance
CEQ	Council of Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	Code of Federal Regulations
CH4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
Corps	U.S. Army Corps of Engineers
CORRACTS	Corrective Action Sites
CPR	cardiopulmonary resuscitation
CSCSL NFA	Confirmed and Suspected Contaminated Sites List No Further Action
CTMP	Construction Traffic Management Plan
CUP	Conditional Use Permit
CWA	Clean Water Act
DAHP	Department of Archaeology and Historic Preservation
dB	decibels
dBA	A-weighted decibel
Draft EIS	Draft Environmental Impact Statement
DSHS	Department of Social and Health Services
DSTT	Downtown Seattle Transit Tunnel

East Link Project Final EIS	East Link Project Final Environmental Impact Statement
Ecology	Washington State Department of Ecology
EDNA	Environmental Designation for Noise Abatement
EDR	Environmental Data Resources, Inc.
EMF	electromagnetic field
EMI	electromagnetic interference
EMT	emergency medical technician
EPA	U.S. Environmental Protection Agency
EPF	essential public facility
ERNS	Emergency Response and Notification System
ESA	Endangered Species Act
ESMS	Environmental and Sustainability Management System
FAZ	Forecast Analysis Zone
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
Forest Street OMF	Forest Street Operations and Maintenance Facility
FTA	Federal Transit Administration
FTA guidance manual	Transit Noise and Vibration Impact Assessment
FTTS	Fungicide & Rodenticide Act and Toxic Substances Control Act Tracking System
GHG	greenhouse gas
GIS	geographic information system
GMA	Growth Management Act
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response Standard
HPA	Hydraulic Project Approval
I-405	Interstate 405
I-5	Interstate 5
I-90	Interstate 90
ICNIRP	International Commission on Non-Ionizing Radiation Protection
KOP	key observation point
kWh	kilowatt hours
Ldn	day-night sound level
LEED	Leadership in Energy and Environmental Design
Leq	equivalent sound level
LI	Light Industrial

LID	low-impact development
Lmax TC	maximum noise levels
LMC	Lynnwood Municipal Code
Long-Range Plan	Sound Transit Regional Transit Long-Range Plan
LOS	level of service
LRV	light rail vehicle
Lynnwood Link Extension Draft EIS	Lynnwood Link Extension Draft Environmental Impact Statement
MAP-21	Moving Ahead for Progress in the 21st Century Act
MBTA	Migratory Bird Treaty Act
Metro	King County Metro Transit
MMBtu	million metric British thermal units
MOU	Memorandum of Understanding
mph	miles per hour
MPO	Metropolitan Planning Organization
MRI	magnetic resonance imaging
MRP	Mitigation Reserves Program
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MT	million metric tons
MTCA	Model Toxics Control Act
N_2O	nitrous oxide
NAAQS	national ambient air quality standards
NEPA	National Environmental Policy Act
NFRAP	No Further Remedial Action Planned
NGPA	Native Growth Protection Area
NHI	Natural Heritage Inventory
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRHP	National Register of Historic Places
O&M	operations and maintenance
O_3	ozone
OHWM	ordinary high water mark
OMSF	Operations and Maintenance Satellite Facility

OSHA	Occupational Safety and Health Administration
P1	Public
Pb	lead
PGIS	pollution generating impervious surface
PHS	Priority Habitats and Species
PM	particulate matter
PM10	particulate matter 10 microns in diameter or less
PM2.5	particulate matter 2.5 microns in diameter or less
PRO	Parks, Recreation, and Open Space
proposed project	Sound Transit Link Light Rail Operations and Maintenance Satellite Facility Project
PSCAA	Puget Sound Clean Air Agency
PSE	Puget Sound Energy
PSRC	Puget Sound Regional Council
PUD/PNW	Public Utilities District/Pacific Northwest
PVC	polyvinyl chloride
RCRA	Resource Conservation and Recovery Act
RCRA-CESQG	Resource Conservation and Recovery Act-Conditionally Exempt Small Quantity Generator
RCU	reportedly cleaned up
RCW	Revised Code of Washington
RMS	root-mean-square
ROD	Record of Decision
ROG	reactive organic gas
RTIP	regional transportation improvement program
RTP	regional transportation plan
SAFETEA-LU	Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users
SARA	Superfund Amendments and Reauthorization Act
SEPA	State Environmental Policy Act
SHPO	State Historic Preservation Officer
SMA	Shoreline Management Act
SMP	Shoreline Master Program
SnoPUD	Snohomish County Public Utilities District
SO_2	sulfur dioxide
SPCC	spill prevention, control, and countermeasures

SR	State Route
ST2	Sound Transit 2: Making Connections, The Regional Transit System Plan for Central Puget Sound
SWPPP	Stormwater Pollution Prevention Plan
TCPs	Traditional Cultural Properties
TESC	temporary erosion and sediment control
TFP	Transportation Facilities Program
TIP	Transportation Improvement Project
TMDL	Total Maximum Daily Load
TPSS	traction power substation
TSCA	Toxic Substances Control Act
U.S.C.	United States Code
ULI	Urban Land Institute
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank
UW	University of Washington
VCP	Voluntary Cleanup Program
VdB	velocity decibels
VOCs	volatile organic compounds
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WISAARD	Washington Information System for Architectural and Archaeological Records Database
WPZ	wellhead protection zone
WRIA	Water Resources Inventory Area
WSAPM	Washington Statewide Archaeological Predictive Model
WSDOT	Washington State Department of Transportation

Appendix A.5

Glossary

Glossary

Air pollutant. Smoke, dust, fumes, or odors in the ambient air that have the potential for harmful effects.

Alignment. Horizontal geometric elements, which define the location of the light rail track or roadway.

Aquatic resource. The physical elements of the aquatic environment, such as streams, rivers, lakes, and shorelands; as well as life forms such as aquatic plants and fish that live within the aquatic environment.

Aquifer. An underground layer of water-bearing permeable rock or unconsolidated materials (gravel, sand, or silt) from which groundwater can be extracted using a water well.

Arterial. A major thoroughfare used mainly for through traffic rather than access to adjacent property. Arterials generally have greater traffic-carrying capacity than collector or local streets and are designed for continuously moving traffic.

At-grade. Term used to express that a feature, such as a rail track or crosswalk, and a roadway meet at the same elevation.

Attainment area. An attainment area is an area considered to have air quality as good as or better than the national ambient air quality standards for specific pollutants as defined in the Clean Air Act.

A-weighted sound level (dBA). To approximate the way humans interpret sound, a filter circuit with frequency characteristics similar to the human hearing system is built into sound measurement equipment. Measurements with this filter enacted are referred to as A-weighted sound levels, expressed in dBA (see Decibel).

Best management practices (BMPs). Approved physical, structural, and/or managerial practices that, when used singularly or in combination, prevent or reduce pollutant discharges.

Buffer. An area adjacent a critical area (e.g., wetland or stream) that functions to avoid loss or decline in ecological functions and values. In addition to preserving the ecological functions of a wetland system, a buffer physically isolates a critical area from potential disturbance and harmful intrusion, and works to minimize risk to the public from loss of life, well-being, or property damage.

Capacity, person. The maximum number of persons that can be carried past a given location during a given time period under specified operating conditions without unreasonable delay, hazard, or restriction (usually measured in terms of persons per hour).

Capacity, vehicle. The maximum number of vehicles that can be accommodated in a given time by a transit or highway facility.

Capital costs. Non-recurring costs required to construct transit systems, including costs of right- of-way, facilities, rolling stock, power distribution, and the associated administrative and design costs, as well as financing charges during construction.

Carbon monoxide (CO). A colorless, odorless, tasteless gas, and one of the U.S. Environmental Protection Agency's criteria air pollutants released from automobile exhaust.

Census tract. A census tract is a small subdivision of an urban area used by the U.S. Census Bureau to identify population and housing statistics. Census blocks are subdivisions of census tracts and are the smallest unit of census geography for which the Census Bureau collects data. The boundaries of census blocks are generally streets or other notable physical features and often correspond to a city block. A census block group is a combination of census blocks, typically encompassing two to four city blocks. The U.S. Census collects some information at the block level, some at the block group level, and some at the tract level.

Concentration (also, level). A measure of the air pollutant in the ambient air, having the units of mass per volume.

Conformity (air quality). A process that ensures federal funding and approval goes to transportation activities consistent with federal air quality goals. The Federal Highway Administration and the Federal Transit Administration jointly determine that specific regions meet air quality standards.

Construction staging area. During construction, a site temporarily used for materials or equipment storage, assembly, or other temporary, construction-related activities.

Criteria air pollutants. Those air pollutants that have been recognized by the U.S. Environmental Protection Agency as potentially harmful and for which standards have been set to protect the public health and welfare. The criteria air pollutants are carbon monoxide, sulfur dioxide, particulates, nitrogen dioxide, ozone, hydrocarbons, and lead.

Day night sound level (Ldn). Ldn is a 24-hour equivalent continuous sound level (Leq), but with a 10-dB penalty assessed to noise events occurring at night. Nighttime is defined as 10 pm to 7 am. This strongly weights Ldn toward nighttime noise because most people are more easily annoyed by noise during the nighttime hours when background noise is lower and most people are sleeping.

dBA. The sound level obtained through the use of A-weighting characteristics specified by the American National Standards Institute (ANSI) Standard S1.4-1971. The unit of measure is the decibel (dB), commonly referred to as dBA when A-weighting is used. The "A" weighting scale closely resembles human response to noise.

Decibel. The unit used to measure the loudness of noise.

De minimis. De minimis is a Latin phrase meaning something of insignificance or negligible. De minimis impacts are defined as those elements that do not adversely affect the activities, features, and attributes of a Section 4(f) resource or property.

Dewatering. The temporary removal of ground or surface water from a construction area to allow construction to be done under dry conditions.

Displacement. A property acquisition that would require removing an existing use.

Ecologically sensitive area. An area, valued locally for its rare or sensitive habitat, existing in a relatively undisturbed, natural state and supporting indigenous species.

Elevated guideway. A guideway that is positioned above the normal activity level (e.g., elevated structure for light rail to cross over a street).

Emission. Particulate, gaseous, noise, or electromagnetic byproducts of the transit system or vehicle.

Endangered species. According to the Endangered Species Act of 1973, an endangered species is any species in danger of extinction throughout all or a significant portion of its range, other than an insect determined by the Secretary of the Interior to constitute a pest whose protection under the provisions of this act would present an overwhelming and overriding risk to man.

Equivalent level (Leq). Leq is a measure of sound energy over a period of time. It is referred to as the equivalent sound level because it is equivalent to the level of a steady sound which, over a referenced duration and location, has the same A-weighted sound (dBa) energy as the fluctuating sound.

Forest habitat. In the Puget Sound lowlands, a habitat type generally dominated by Douglas fir, western red cedar, and western hemlock, frequently with a hardwood understory. The ground cover is generally lush. Birds and small mammals abound, and larger mammals are common in large stands.

Full acquisition. The full parcel would be acquired and the current use would be displaced. Full acquisitions include parcels that might not be fully needed for the project but would be affected to the extent that current uses would be substantially impaired (e.g., loss of parking or access).

Glacial till. This type of soil typically consists of a diverse mix of gravelly sand with scattered cobbles and boulders in a clay/silt matrix. It is very dense and is locally referred to as “hardpan.” The predominant glacial till encountered in the project area is Vashon-age glacial till.

Grade separated. Parallel or crossing lines of traffic that are vertically or horizontally physically separated from each other and do not share a common intersection.

Greenhouse gas (GHG). Greenhouse gases include carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor, nitrous oxide (N_2O), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs), and sulfur hexafluoride (SF6). These gas emissions are collectively leading to the greenhouse effect, trapping the sun’s solar rays and leading to an increase in Earth temperature.

Groundborne noise. Noise that is transmitted through the ground, typically reported in decibels.

Groundborne vibration. A small but rapidly fluctuating motion transmitted through the ground, typically reported as velocity or acceleration.

Guideway. Specifically designed way traversed by transit vehicles constrained to the way (see Elevated Guideway).

Habitat function. Terrestrial plant communities, wetlands, and aquatic systems such as streams provide a variety of functions in the environment. For instance, depending on the condition and location of a wetland, wetland functions might include water quality improvement, groundwater recharge, nutrient and sediment filtering, and habitat for a variety of animals, as well as education and recreation opportunities for people—the habitat function is one of several functions potentially performed by wetlands. Similarly, terrestrial and aquatic systems each also may perform many functions. When they provide habitat for animals, they are said to be performing or providing a "habitat function."

Habitat value. The value of a plant community's function as determined by the habitat's ability to support the needs of biological species. High-value habitats are those that support or may support threatened, endangered, and/or sensitive species as determined by federal, state, and local jurisdictions.

Hazardous materials. Hazardous materials are materials, which, because of their chemical, physical, or biological nature, pose a potential risk to life, health, or property when released. Such materials include hazardous waste, dangerous waste, hazardous substances, and toxic substances.

Headway. The headway between vehicles in public transit systems is the amount of time (usually in minutes) that elapses between two vehicles passing the same point traveling in the same direction on a given route.

High-capacity transit. A system of public transportation services within an urbanized region operating principally on exclusive rights-of-way; examples include light rail transit or express buses on exclusive bus ways and their supporting services.

Hours of service. The number of hours during the day between the start and end of service on a transit route, also known as the service span.

Ldn. The day/night average noise level.

Leq. The equivalent steady-state sound level that, in a specified time period, would contain the same acoustic energy as the varying sound level during the same period; considers volume capacity, travel speeds, and delay.

Leq(h). The hourly value of Leq.

Level of service (LOS). A qualitative measure that represents the collective factors of travel under a particular volume condition. A measure of traffic congestion.

Light rail transit (also light rail). A mode of mass transportation comprising light rail vehicles, which travel on steel tracks and are powered by electricity from overhead wires. This mode is characterized by its ability to operate in at-grade and/or grade-separated environments.

Link. Sound Transit's light rail system.

Load factor. The average ratio of passengers to seats, during a specified period of operation of a public transit route.

Low income. A person whose median household income is at or below the U.S. Department of Health and Human Services poverty guidelines.

Low income population. Any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by the project.

Maintenance area. Maintenance areas are geographic areas with a history of non-attainment of National Ambient Air Quality Standards (NAAQS) but which now consistently meet NAAQS.

Megawatt (MW). 1,000,000 watts.

Minority. A person who is:

- Black - A person having origins in any of the black racial groups of Africa;
- Hispanic or Latino - A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race;
- Asian - A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent;
- American Indian or Alaskan Native - A person having origins in any of the original people of North or South America, including Central America, and who maintains cultural identification through tribal affiliation or community recognition; or
- Native Hawaiian or Other Pacific Islander - A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Minority population. Any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by the project.

Mobility. The ease of continuous movement along the transportation system.

Mode. A particular form or method of travel, such as pedestrian, bicycle, automobile, bus, or light rail.

Model Toxics Control Act (MTCA). The Model Toxics Control Act Cleanup Regulation, WAC 173-340, implements the Model Toxics Control Act, RCW 70.105D, which addresses strict requirements for site discovery and reporting, site assessments, and site remediation. Most important, the regulation defines standard methods used to assess whether a site is contaminated or clean.

National Ambient Air Quality Standards (NAAQS). Federal limits on levels of atmospheric contamination necessary to protect the public from adverse effects on health (primary standards) and welfare (secondary standards).

National Historic Preservation Act of 1966 (NHRA). The Act that established the National Register of Historic Places and State Historic Preservation program and set forth guidelines and regulations for environmental review of projects involving federal funding.

National Register of Historic Places (NRHP). The official list of the nation's cultural resources determined to be worthy of preservation; the register is maintained by the National Park Service.

Network. A system of real or hypothetical interconnecting links that forms the configuration of transit routes and stops comprising the total system.

Nonattainment area. An area designated by the U.S. Environmental Protection Agency as currently violating the National Ambient Air Quality Standards, based on archival air quality data.

NO_X. Oxides of nitrogen (nitrogen oxide and nitrogen dioxide). The pollutants released during high-temperature combustion of fossil fuels such as diesel.

Off-peak. Those periods of the day when demand for transit service is not at a maximum.

Operating costs. Recurring costs incurred in operating transit systems, including wages and salaries, maintenance of facilities and equipment, fuel, supplies, employee benefits, insurance, taxes, and other administrative costs. Amortization of facilities and equipment is not included.

Ozone. A gas consisting of three oxygen atoms formed in reactions of non-methane hydrocarbons and nitrogen oxides in the presence of sunlight. Ozone is one of the U.S. Environmental Protection Agency's criteria air pollutants.

Palustrine forested wetland. Freshwater wetlands dominated by trees, shrubs, and emergent vegetation.

Partial acquisition. Part of a parcel would be acquired, but the current use generally would not be displaced. In some instances, such as larger parcels that hold multiple uses, a business or residential unit on a parcel could be displaced, but most uses would remain.

Particulate matter. A mixture of extremely small particles and liquid droplets that is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. U.S. Environmental Protection Agency is concerned about particles that are 10 micrometers in diameter or smaller because those are the particles that generally pass through the throat and nose and enter the lungs.

Peak hour. The hour of the day in which the maximum demand for service is experienced, accommodating the largest number of automobile or transit patrons.

Peak period. A time period or periods when travel activity is at its heaviest.

Pollution-Generating Impervious Surface (PGIS). Impervious surfaces considered to be a significant source of pollutants in stormwater runoff. Such surfaces include those subject to vehicular use, industrial activities (as defined in Washington State Department of Ecology's Stormwater Management Manual), or storage of erodible or leachable materials, wastes, or chemicals, and which receive direct rainfall or the run-on or blow-in of rainfall.

Potentially affected area. This is defined differently by each technical discipline. It includes the area that could be affected by the light rail alternatives.

Preferred Alternative. Following publication of the Draft EIS, the Sound Transit Board identifies a Preferred Alternative, including route and station options. The Final EIS will further evaluate the Preferred Alternative as well as other alternatives.

Recessional outwash. Sediment deposited by meltwater streams flowing away from a retreating glacier during the last episode of glaciation.

Reliability. How often transit service is provided as promised; affects waiting time, consistency of passenger arrivals from day to day, total trip time, and loading levels.

Right-of-way. The corridor (horizontal and vertical space) owned by the transit agency for the transportation way.

Riparian habitat. A habitat type associated with stream or river margins and characterized by dense vegetation consisting primarily of willow, alder, and cottonwood species, supporting a wide variety of waterfowl, songbirds, amphibians, and small mammals.

Runoff. The rainwater that directly leaves an area in surface drainage, as opposed to the amount that seeps out as groundwater.

Section 106. Section 106 of the National Historic Preservation Act of 1966 established a procedure to review the potential effects on cultural resources by projects that involve a federal action.

Section 4(f). Section 4(f) of the U.S. Department of Transportation Act restricts the United States Department of Transportation's approval of projects affecting the following properties: publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge, or any land from a significant historic site.

Section 401. Section 401 of the Clean Water Act is a certification program administered by the Washington Department of Ecology under guidelines of the U.S. Environmental Protection Agency to ensure projects applying for a Section 404 permit comply with state water quality standards and other requirements of the state law.

Section 404. Section 404 of the Clean Water Act is a permit program administered by the U.S. Army Corps of Engineers under guidelines by the U.S. Environmental Protection Agency to protect the nation's waters from dredged and fill sources.

Section 6(f). Section 6(f) of the Land and Water Conservation Act of 1965 established restrictions on, and replacement requirements for, the use of land acquired with funds authorized under the Land and Water Conservation Fund Act.

Sensitive receptor (Auditory). A local area or site that supports activities easily disrupted by audio intrusions or distractions, such as a school, historic landmark, or residential neighborhood.

Sensitive view. A view that is identified by local jurisdictions as requiring protection.

Social interaction. Intra-neighborhood communication and circulation using street, sidewalk, and bikeway connections between residential areas and community facilities, retail businesses, and employment centers. Also includes verbal interaction and telecommunications facilities.

Sound Transit 2 (ST2). A package of high-capacity transit investments in the regional transit system, adopted by the Sound Transit Board in July 2008, which included light rail as the mode choice for the project corridor. ST2 includes a major expansion of the Link light rail system. ST2 would extend light rail from North Seattle into Snohomish County, across Lake Washington into East King County, and south of Sea-Tac International Airport to Federal Way.

Staging area. Section of land near a construction site designated for equipment and truck storage, maintenance, and warm-up prior to engagement in construction activities.

State Implementation Plan (SIP). A plan required of each state by the Clean Air Act that describes how the state will attain and maintain the National Ambient Air Quality Standards.

Stormwater. Stormwater is rain and snow melt that runs off surfaces such as rooftops, paved streets, highways, and parking lots. As water runs off these surfaces, it can pick up pollution.

Stormwater detention. The temporary storage of stormwater runoff and subsequent release at a slower rate.

Stormwater treatment. Stormwater ponds and underground vaults are used to remove sediments and dissolved metals from stormwater. They collect sediments on the bottom of the pond or vault, where maintenance workers can clean them out on a regular basis.

Subduction zone. An area where one crustal plate is descending below another. The Puget Sound area is close to a subduction zone, which is formed by the Juan de Fuca plate descending below the North American plate. This action can cause significant seismic activity.

Threatened species. According to the Endangered Species Act of 1973, any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Title 23, Code of Federal Regulations, Part 771 (23 CFR Part 771) (Revised 1987). Federal Highway Administration and Federal Transit Administration regulations governing the preparation of environmental impact statements and related documents.

Total Maximum Daily Load (TMDL). For 303(d)-listed water bodies, TMDLs are developed by the Washington State Department of Ecology for the pollutants that exceed water quality standards as a means for ultimately attaining the standards.

Till. A poorly sorted, gravel-like deposit of sediment that is left behind by a glacier, which does not show stratification. Till is sometimes called boulder clay because it is composed of clay, boulders of intermediate sizes, or a mixture of these.

Transit. A transportation system principally for moving people in an urban area and made available to the public usually through paying a fare.

Transit center. A station with shelters where a large number of transit vehicles and passengers can be brought together with safety and convenience.

Transit-oriented development. The Transportation Research Board provides several definitions of transit-oriented development that emphasize high-quality walking environments, mixed land uses, and high-density developments linked to transit. Generally, transit agencies agree that what constitutes a transit-oriented development is a pattern of dense, diverse, pedestrian-friendly land uses near transit nodes that, under the right conditions, translates into higher transit patronage.

Travel time (in vehicle). The time required to travel between two points, not including terminal or waiting time.

Trip. The one-way movement of one person between the origin and the destination, including transfers, and the walk distance to and from the means of transportation.

Unity. In visual analysis, the visual coherence and compositional harmony of the landscape.

Use of Section 4(f) land. According to regulations of the U.S. Department of Transportation, use of Section 4(f) land is defined as: (1) acquisition of title or easement to land, or (2) in unusual circumstances, serious indirect impacts, such as increase in noise, visual intrusion, or access obstruction.

Vehicle hours of travel (VHT). The total vehicle hours expended traveling on the roadway network in a specified area during a specified time period.

Vibration velocity. Vibration velocity is the basic measure of groundborne vibration. It is a measure of the rate at which particles in the ground are oscillating relative to the equilibrium point.

Vibration velocity level. It is generally accepted that, over the frequency range important for groundborne vibration from transit systems, human response to vibration is best correlated to the root mean square (rms) vibration velocity. In this EIS, rms vibration velocity is always expressed as decibels relative to 1 micro-inch per second.

Viewer sensitivity. The extent of the viewer's concern for a particular view or viewshed. Viewer sensitivity to the viewed environment is classified as low, average, or high.

View. A scene observed from a given vantage point.

Viewshed. An area of land, water, or other environmental element that is visible to the human eye from a fixed vantage point.

Visual character. Refers to identifiable visual information, including visual elements and major environmental features.

Visual encroachment. The imposition of an object, or objects, on a view such that the view is disrupted, obstructed, or otherwise modified from its original state.

Visual quality. Refers to the evaluation of the visual experience to the public and is described in terms of vividness, intactness, and unity. *Vividness* refers to the way landscape components combine in distinctive and memorable visual patterns. *Intactness* refers to whether the natural and human-built visual patterns form a consistent landscape, or whether highly contrasting features intrude into the view. *Unity* refers to the visual coherence and compositional harmony of the landscape considered as a whole. Visual quality is an assessment of the visual character and is categorized as low, medium, or high, as follows:

Low visual quality. Views that lack a dominant visual character in which there is a low level of fit between disparate elements. In some cases, these views appear disorganized with features that seem out of place, or are views with some compositional harmony but include eyesore elements that can dominate one's perception.

Medium visual quality. Views with a unity or compositional harmony between elements of the landscape that produce a pleasing overall impression in which encroaching elements are minor and do not substantially alter the perception of the landscape as a unit. These views lack vivid, memorable features and are generally characterized as common or ordinary.

High visual quality. Views with vivid, memorable, distinctive features in a landscape with compositional harmony or that fit between elements of the landscape that is free from encroaching elements.

Washington State Department of Ecology 303(d) List. The federal Clean Water Act (CWA), adopted in 1972, requires states to restore their waters to be "fishable and swimmable." The CWA established a process to identify and clean up polluted waters. Every 2 years, all states are required to prepare a list of water bodies that do not meet water quality standards. This list is called the 303(d) list because the process is described in Section 303(d) of the CWA.

Appendix A.6

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Appendix B

Public Involvement and Agency Coordination

Appendix B

Public Involvement and Agency Coordination

This appendix summarizes the agency coordination and public outreach activities performed by the Central Puget Sound Regional Transit Authority (Sound Transit) and the Federal Transit Administration (FTA) throughout the environmental review process, up to issuance of the Draft Environmental Impact Statement (Draft EIS). As the federal National Environmental Policy Act (NEPA) lead agency, FTA has worked with federal agencies and tribes and Sound Transit, as the local lead agency under Washington State Environmental Policy Act (SEPA), has worked with local public transportation agencies, local jurisdictions, and state agencies to create an open public involvement process providing various opportunities to inform and involve the public.

In September 2012, Sound Transit and FTA drafted a coordination plan that describes their efforts for coordinating the participation of the public, agencies, and tribes in the environmental review of the Link Light Rail Operations and Maintenance Satellite Facility (OMSF) project (proposed project). The lead agencies have also drafted an Environmental Scoping Information Report (September 2012) and Environmental Scoping Summary Report (October 2012) to document the proposed project's scoping process. Copies of these documents are available for review and can be obtained by contacting Sound Transit's Community Outreach Specialist, Jenna Franklin (206-903-7752 or jenna.franklin@soundtransit.org) or from Sound Transit's project website (www.soundtransit.org/omsf).

The discussion below references these documents to outline the goals, objectives, and implementation of the public and agency outreach activities throughout the proposed project.

Outreach Goals and Objectives

Sound Transit and FTA have provided several opportunities for citizens and groups to interact with, and receive response on issues of interest or concern in the development and evaluation of the proposed project. Sound Transit has established the following goals and objectives to guide the process.

- Inform the public of the proposed project's purpose and need, and identify and communicate the process and schedule for public participation.
- Actively seek public input throughout all project stages of planning, environmental review, project development, and design.
- Research and respond to public inquiries, suggestions, and ideas in the decision-making process.
- Provide opportunities for the public to influence major decisions before they are finalized.
- Publicize all programs and activities through a variety of diverse communication vehicles and make the proceedings and records available for public review.

- Provide the public with different and innovative opportunities and methods for accessing project information throughout each project phase.
- Ensure diverse populations, including minority and low-income populations and persons with disabilities, are engaged in the planning and development process by making materials available in multiple formats, holding meetings in accessible facilities, and providing meeting and project information to underserved populations.
- Communicate key project milestones and accomplishments to show progress toward project completion. Ensure transparency of the process by communicating the needs, potential solutions, schedules, and budget information.
- Work closely with Sound Transit government and community relations staff and the project team to ensure public outreach efforts and government-elected official and tribal involvement efforts are coordinated.
- Continuously monitor and adapt outreach activities and tools to help reach affected and interested populations and interests.

Agency Coordination

Early agency coordination is strongly encouraged by NEPA, SEPA, and federal transportation planning law and guidance. Section 139 of Title 23 United States Code identifies specific processes for the lead agencies of the project (Sound Transit and FTA) to involve cooperating or participating agencies. These agencies and their involvement are described below.

Lead Agencies

The lead agencies are responsible for making information available to the cooperating and participating agencies as early as practicable in the environmental review process. Federal, state, and local agencies and tribal governments were invited to participate. Agencies had the choice to accept the invitation as a cooperating or participating agency, decline the invitation, or ask to be involved or contacted at a later time. The invitations were made as part of the scoping announcements to the cooperating and participating agencies listed below.

Cooperating Agencies

A cooperating agency is defined as a federal, state, tribal, or local agency having special expertise with respect to an environmental issue or jurisdiction by law. It has the responsibility to assist the lead agency by participating early in the NEPA process, including involvement in the in the scoping process; developing information and preparing environmental analyses; reviewing and commenting on the preliminary Draft EIS, and associated technical reports, prior to public issuance; and at the lead agency's request, making available staff support to enhance the lead agency's interdisciplinary capabilities.

Cooperating agencies of the project include the following.

- City of Lynnwood
- City of Bellevue
- King County
- Snohomish County

Participating Agencies

A participating agency is defined as a federal and non-federal agency that may have an interest in the project, even if they do not have specific jurisdiction by law. These agencies are invited to participate in the environmental review process. Participating agencies of the proposed project include the following.

- U.S. Department of Interior
- U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency
- U.S. Army Corps of Engineers
- Bureau of Indian Affairs
- Advisory Council on Historic Preservation
- National Oceanic and Atmospheric Administration
- Federal Emergency Management Agency
- National Park Service
- Snohomish County Public Utility District
- City of Edmonds
- City of Shoreline
- City of Redmond
- City of Mountlake Terrace
- City of Seattle
- Washington State Department of Ecology
- Washington Department of Archaeology and Historic Preservation
- Washington State Department of Transportation
- Washington Department of Natural Resources
- Washington Department of Fish and Wildlife
- Puget Sound Regional Council
- Puget Sound Regional Clean Air Agency

The build alternative sites for the proposed project area do not include any tribal lands, but tribes are expected to have interests regarding natural and cultural resources based on treaty rights and information from Washington Department of Archaeology and Historic Preservation (DAHP). Because of government-to-government consultation responsibilities associated with federally recognized tribes, FTA and Sound Transit invited the following tribes to become participating agencies as part of scoping and initiated consultation under Section 106 of the National Historic Preservation Act (NHPA) at the same time.

- Muckleshoot Indian Tribe
- Snoqualmie Tribe
- Suquamish Tribe
- Tulalip Tribes
- Yakama Nation

Outreach Activities and Tools

Sound Transit and FTA implemented the outreach activities and tools identified below, and will continue throughout the environmental process. Some of the activities are focused on specific project milestones, but many are applied on an ongoing basis. All outreach activities are coordinated between an intra-agency team at Sound Transit that includes government relations, planning,

design, environmental, media relations, communications, and outreach staff. Outreach activities and tools are discussed below and in Table 2. Table 2, at the end of this appendix, provides a list of all public involvement activities conducted since October 2012.

Open Houses

Sound Transit held public scoping meetings in an open-house format during the scoping period to share information, answer questions, and obtain public input. Open houses presented information about the project, provided the opportunity for the public to speak directly with project team members and/or ask questions, and provided an opportunity to request and collect written comments. After the scoping period closed in October 2012, updated information on the proposed project and an opportunity to provide input was made available at the East Link Cost Savings open house held in April 2013, and six open houses for the East Link Extension "Welcome to Final Design" held between March and September 2013.

Notices and Advertisements

Sound Transit provided postcard notices and online and printed advertisements to notify and engage the public and agencies during scoping. Sound Transit sent postcard notices to 57 government and community relations stakeholders, 88 social service organizations, and over 11,400 addresses located within 0.5 mile of the potential build alternative sites for the OMSF.

Since the scoping period closed, Sound Transit distributed updated project information via mailers for other Sound Transit projects, such as East Link and Lynnwood Link Extension and approximately 1,500 OMSF subscribers received E-newsletters. Mailers were also sent out to update stakeholders on project progress.

Sound Transit Web Page

Sound Transit developed a website (www.soundtransit.org/omsf) to provide information on the proposed project and how the public can get involved. The site provides project highlights, phases and milestones, information on meetings and events, site plans and layouts for each OMSF build alternative and downloadable documents with specific project information and background. The site also lists the many opportunities for the public to participate throughout the project process.

Public and Agency Briefings

Sound Transit conducted briefings to inform Lynnwood and Bellevue City Council members and staff, community organizations, neighborhood associations, and potentially affected businesses and property owners in the vicinity of the build alternative sites about the proposed project. Briefings typically included a group presentation to provide an overview of the project and a question and answer session to obtain public input. In some instances, telephone briefings with potentially affected property owners or their representatives were conducted. Also, ongoing contact and regular project status updates were provided to Lynnwood and Bellevue city staff via phone, email, and meetings. A list of these briefings is included in Table 2 at the end of this appendix.

Forest Street OMF Site Tours

Sound Transit conducted midnight site tours of the existing Forest Street Operations and Maintenance Facility (Forest Street OMF) for Bellevue City Council members and City Manager and Lynnwood's' City Council staff. The purpose of the tours was to let city staff observe nighttime operational noise and lighting levels at the existing facility. These tours took place in October 2012.

Background Materials

Background materials were provided to the public to offer additional information about the proposed project and its environmental process. These materials included the Environmental Scoping Information Report, the Draft Coordination Plan, and copies of the Notice of Intent to Prepare an EIS and SEPA Determination of Significance. These publications were made available on the project website and at public meetings during the scoping process.

Outreach to Minority and Low-Income Populations

Sound Transit and FTA have contacted service providers and community groups to help connect with minority and low-income groups (list provided in Coordination Plan), and will continue to engage these groups throughout the project process. The lead agencies have also helped non-English speakers engage with the proposed project by offering language translations for notices and literature in Chinese, Mandarin, Hindi, Japanese, Korean, Russian, Spanish, and Vietnamese. Additionally, OMSF fact sheets and related information can be translated upon request, as well as articles for newsletters, websites, or other communication tools used by service providers and community groups. Interpretation services have also been offered on the proposed project's public notices.

Outreach Steps in the Environmental Impact Statement Process

Public input to the proposed project is an essential element of the alternatives development, environmental analysis, documentation, and review process. As described above, the lead agencies have used a variety of methods to reach out to the public, including open houses, notifications, and briefings. Consistent with NEPA, Sound Transit and FTA have made diligent efforts to involve the public in preparing and implementing NEPA procedures that involve decision that would affect the community. These outreach and coordination efforts for the preparation of the EIS are described in this section.

Notice of Intent and Scoping

From September 17 to October 22, 2012, Sound Transit and FTA conducted public scoping for the Draft EIS. The purpose of scoping was for the lead agencies to share information about the public process, environmental resources, and potential alternatives with the public and agencies with the proposed project vicinity. As stated previously, the NEPA and SEPA scoping process began with formal notices to prepare an EIS, accompanied by advertisements and other public notices and outreach materials. For NEPA, a Notice of Intent to prepare an EIS was published in the *Federal Register* on September 17, 2012. For SEPA, a Determination of Significance and scoping notice was published in the SEPA register on September 19, 2012. Sound Transit also provided website links to the notices at (www.soundtransit.org/omsf).

During the scoping period, Sound Transit and FTA asked the public to provide comments on the proposed project's purpose and need statement, environmental issues for evaluation in the EIS, and the potential alternatives being considered for study in the Draft EIS.

Public and Agency Scoping Meetings

During the 30-day scoping comment period, the lead agencies hosted two public scoping meetings and one meeting for the agencies and tribes. Approximately 100 people attended the public meetings and staff from five of the 31 invited agencies and tribes attended the agency meeting (Table B-1).

Table B-1. Public and Agency Scoping Meetings

Meeting/Date/Time	Location	Number of Attendees
Public Meetings		
October 8, 2012 4:00–6:00 p.m.	Highland Community Center 14224 Bel-Red Road Bellevue, WA 98007	70 (63 signed in)
October 11, 2012 5:00–7:00 p.m.	Lynnwood Convention Center 3711 196th Street SW Lynnwood, WA 98036	30 Attendees (26 signed in)
Agency and Tribal Meeting		
October 9, 2012 1:00–3:00 p.m.	Ruth Fisher Board, Union Station 401 S Jackson Street, Seattle, WA 98104	5 agencies

As described previously, the public scoping meetings were held in an open-house format combined with a presentation of the project and a Q&A session. The meetings included sign-in areas, comment forms, and information stations with displays and background materials. Sound Transit and FTA staff were available to listen and answer the participant's questions.

From these meetings, common topics of concern were as follows.

- Compatibility of the proposed project with neighboring land uses
- Compatibility of the proposed project with future land use plans
- Displacement of businesses
- Property values
- Safety and security
- Noise
- Light and glare
- Visual quality
- Wetlands
- Parks and trails
- Process for identifying potential sites
- Relationship of the OMSF to the Lynnwood Link Extension and East Link

For the agency/tribal meeting, a similar format as the public meetings was provided. The lead agencies presented an overview of the project and then engaged the group in a Q&A session. Agency representatives from FTA, WSDOT, the cities of Lynnwood and Redmond, and Edmonds School District attended the meeting.

All scoping comments Sound Transit and FTA received are summarized in the Environmental Scoping Summary Report (October 2012). This document is available on the project website.

Development of Alternatives

Sound Transit and FTA coordinated meetings with representatives of local jurisdictions along the Lynnwood Link Extension and East Link corridors to assist in the identification of potential OMSF sites. Site characteristics related to physical and environmental factors, system and facility operations, and consistency with regional transportation plans were documented to assist in consideration of potential OMSF alternatives. The sites that met the physical, operational, and plan consistency requirements were included in the environmental public scoping process. During the public scoping process, additional potential alternative sites were suggested and considered (listed in the OMSF Environmental Scoping Summary Report). Following the public scoping process, the Sound Transit Board of Directors considered scoping comments in identifying the alternatives to study in the EIS.

Draft Environmental Impact Statement

The Draft EIS has been prepared to inform decision makers and the public about the proposed project. It describes, analyzes, and compares the potential environmental impacts from implementation of project alternatives. Prior to the issuance of the Draft EIS to the public, cooperating agencies received a preliminary Draft EIS for review and comment. Sound Transit and FTA have now published the Draft EIS and provided a public review and comment period of 45 days. Public meetings and/or hearings are planned.

A *Federal Register* and SEPA Register notice announced the availability of the Draft EIS, provided a deadline for submission of comments on the Draft EIS, and included meeting dates and locations for public hearings. This information has also been sent to property owners in and surrounding the project alternatives via direct mailings of postcard notifications. This information was also published in local newspapers, local community papers, and other publications. Public hearings will be held during the public review/circulation period for the Draft EIS.

A Notice of Availability was also provided to all parties providing comments during scoping, cooperating and participating agencies, and other agencies or parties with an interest in the proposed project. The announcements provided information on how to obtain copies of the Draft EIS, which will be available electronically via the Sound Transit website, on CDs, at libraries, at Sound Transit office, and in printed or alternative formats upon request.

Final Environmental Impact Statement

After close of the Draft EIS public comment period, Sound Transit and FTA will consider comments and the Draft EIS findings. As part of the Final EIS, Sound Transit and FTA will respond to all substantive written comments and testimony received during the Draft EIS public comment period. Based on the comment review, the Final EIS will update the environmental information for the alternatives, further identify potential mitigation measures, and identify which alternative is preferred, if any. As with the Draft EIS, a Notice of Availability will be placed in the *Federal Register* and advertised. The Final EIS will be distributed to all cooperating and participating agencies and will be available in a variety of media and locations. Notices of the Final EIS availability will also be sent to all parties who provided comments on the Draft EIS.

Table B-2. Public Involvement Activities

Activity	Type	Date	Notes
Bellevue City Council member and City Manager tour of existing OMF at midnight	Site Tour	October 2012	Bellevue City Council members and City Manager given a tour of Forest Street OMF to observe operational noise and lighting levels
Lynnwood City Council and staff tour of existing OMF at midnight	Site Tour	October 2012	Lynnwood City Council members and city staff given a tour of the Forest Street OMF to observe existing operational noise and lighting levels
Ongoing contact and regular status updates with Bellevue City staff	Phone/ Email/ Meetings	Ongoing	
Ongoing contact and regular status updates with Lynnwood City staff	Phone/ Email/ Meetings	Ongoing	
Ongoing contact and status updates with neighborhood groups	Phone/ Email	Ongoing	Bridle Trails, Cherry Crest, Compton Trails, Compton Green
Bridle Trails Community Club Monthly membership meeting	Presentation/ Briefing	November 2012	Presentation to approximately 40 members of BTCC by project manager
Legacy Commercial briefing	Briefing	April 2013	Briefing for owners of a potentially affected parcel
Potentially affected property owner briefings	Briefing: Phone	January through April 2013	Telephone briefings with potentially affected property owners or their representatives (approximately 10)
Eastside Rail Corridor Regional Advisory Council Meeting	Presentation	February 2013	Project overview slides in presentation given by Sound Transit CEO and Advisory Council member Joni Earl
Project Public Involvement Plan shared with City staff for review and comment		February 2013	
Bellevue Downtown Association	Briefing	February 2013	Met with organization to provide overview of the project
Bellevue Chamber of Commerce	Briefing	February 2013	Met with organization to provide overview of the project
Seattle Children's Hospital, Bellevue Clinic and Surgery Center	Briefing	February 2013	Met with organization to provide overview of the project
Proposed project update mailed and distributed to stakeholders	Mailer	April 2013	

Activity	Type	Date	Notes
E-newsletter distributed to 1,500 member OMSF subscriber list	Email	April 2013	
"Concurrent Projects & Plans" mention in East Link Extension project update	Mailer	March 2013	Mailed to approximately 63,000 Bellevue residents
"Related Projects in the Area" mention in Lynnwood Link Extension project update	Mailer	April 2013	Mailed to approximately 83,000 residents along proposed alignment
City of Bellevue "Spring Forward" event	Information and Resource Table	April 2013	Annual showcase for all City of Bellevue and concurrent regional transportation projects
East Link Cost Savings open house	Information and Resource Table	April 2013	
East Link "Welcome to Final Design" open houses-6 total	Information and Resource Table	March through September 2013	

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Appendix C

Environmental Justice

Appendix C

Environmental Justice

Introduction and Regulatory Framework

This appendix describes the opportunities provided to minority and low-income populations to actively participate in the OMSF planning process and evaluates whether the proposed project would result in any disproportionately high and adverse effects on individuals in these populations. The analysis was prepared in compliance with Presidential Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (EO 12898), dated February 11, 1994, and with the U.S. Department of Transportation (USDOT) Order to Address Environmental Justice in Minority Populations and Low-Income Populations (DOT Order 5610.2).

EO 12898, issued by President William Clinton in 1994, provides that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations." The executive order addresses the importance of public participation in the review process. USDOT issued the DOT Order, which establishes the procedures to use in order to comply with EO 12898 in order to avoid disproportionately high and adverse effects on minority and low-income populations. The DOT Order requires agencies to take two actions:

- Explicitly consider human health and environmental effects related to transportation projects that may have disproportionately high and adverse effects on minority or low-income populations.
- Implement procedures to provide "meaningful opportunities for public involvement" by members of minority or low-income populations during project planning and development (DOT Order § 5(b)(1)).

The DOT Order further provides that "In making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancement measures that will be taken and all offsetting benefits to the affected minority and low-income populations may be taken into account, as well as the design, comparative impacts, and the relevant number of similar existing system elements in non-minority and non-low-income areas" (DOT Order § 8(b)).

The following definitions are from the DOT Order for disproportionately high and adverse effects, minority persons, and low-income persons.

1. Disproportionately high and adverse effect on minority and low-income populations means an adverse effect that: is predominately borne by a minority population and/or a low-income population, or would be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that would be

suffered by the non-minority population and/or non-low-income population (DOT Order 5610.2, § Appendix 1(g)).

A minority is a person who meets the following criteria:

- Black (a person having origins in any of the black racial groups of Africa)
- Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race)
- Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands)
- American Indian or Alaskan Native (a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition) (DOT Order 5610.2, § Appendix 1(c))
- A low-income person is identified as a person whose median household income is at or below the Department of Health and Human Services poverty guidelines (DOT Order 5610.2, § Appendix 1(b)).

Methods and Approach

The environmental justice analysis for the proposed project was completed following the guidance documented in Sound Transit's Environmental Action Team Issue Paper No. 36 Implementing Environmental Justice Pursuant to Executive Order 12898 and the Department of Transportation Order to Address Environmental Justice in Minority Populations and Low-Income Populations (Sound Transit 2001) and the Federal Transit Administration's (FTA) August 2012 Circular on Environmental Justice Policy Guidance for Federal Transit Administration Recipients. The issue paper was written to provide specific guidance about environmental justice methodology for impact assessment and public outreach. The issue paper describes the three processes to be used when implementing an environmental justice analysis: public involvement processes, analyzing potential disproportionate high and adverse effects, and documentation.

What are Census Tracts, and Block Groups?

A census tract is a small subdivision of an urban area used by the U.S. Census Bureau to identify population and housing statistics. Census blocks are subdivisions of census tracts and are the smallest unit of census geography for which the Census Bureau collects data. The boundaries of census blocks are generally streets or other notable physical features and often correspond to a city block. A census block group is a combination of census blocks, typically encompassing two to four city blocks. The census collects some information at the block level, some at the block group level, and some at the tract level.

This analysis describes the demographics of the build alternative study areas for the proposed project using the most recent U.S. Census data available at the time the analysis was initiated (2010 and 2011 American Community Survey); provides information on the efforts that Sound Transit has made to involve minority and low-income populations in the vicinity of the build alternative sites; and assesses whether the proposed project would result in disproportionately high and adverse effects on minority and low-income populations, taking into consideration mitigation and enhancement measures and project

benefits, as appropriate. The analysis of potentially disproportionate high and adverse effects is based on the information developed in this environmental impact statement (EIS) and the accompanying technical reports in Appendix E.

Demographics of Study Area

The study area used for the environmental justice analysis is a 0.5-mile radius around each of the build alternative sites. This radius was identified as the area most likely to be affected as a result of the proposed project. The 2010 Census and 2011 American Community Survey data were reviewed to determine the demographic composition of minority and low-income populations located within the study area, and then developed geographic information system (GIS) maps to illustrate the minority and income characteristics of the population in the study area. None of the build alternatives would displace residential uses. Census data is used to characterize the demographics of persons living in the vicinity (i.e., the 0.5-mile study area) of each build alternative site. The study area includes census block groups that are either located entirely or partially within the 0.5-mile radius. Minority populations were analyzed at the census block group level, while income information was reviewed at the census tract level because income and poverty information is not available at the census block group level. Figures C-1 through C-4 show minority percentages in the study area, and Figures C-5 through C-8 show percentages of the population below the poverty line.

As shown in Figures C-1a and C-1b, most census blocks in the Lynnwood Alternative study area have minority concentrations of 50% or lower. The Lynnwood Alternative site itself is located within a census block that has a minority population that is over 50% minority. As of the 2010 census this census block had only 25 residents which somewhat accounts for the disparate demographic makeup. Otherwise, the only other areas with a high minority concentration are located 1,000 feet to the west of the Lynnwood Alternative site between 56th Avenue W and 55th Avenue W, and along 212th Street SW on the southeast side of Interstate 5 (I-5). The Lynnwood Alternative is developed with various commercial and industrial uses. Among these uses, is an office building (20311 52nd Avenue W.) which houses several State of Washington Department of Social and Health Services (DSHS) social service offices including the Children's Administration, Community Service Office, Division of Development Disabilities, Home and Community Service, and the Lynnwood Division of Vocational Rehabilitation.

The development patterns within the study areas for BNSF, BNSF Modified, and SR 520 Alternative is industrial and/or commercial in nature with large portions having no residents at all. Under the BNSF Modified Alternative, the only area with a population that is more than 50% minority is located along the southwestern edge of the study area in downtown Bellevue. Uses in the BNSF Alternative and BNSF Modified Alternative study areas are generally industrial in nature and do not appear to be oriented toward a minority or low-income population. For the SR 520 Alternative, the only areas with populations that are more than 50% minority are located along the southern and northern edges of the study area**.**

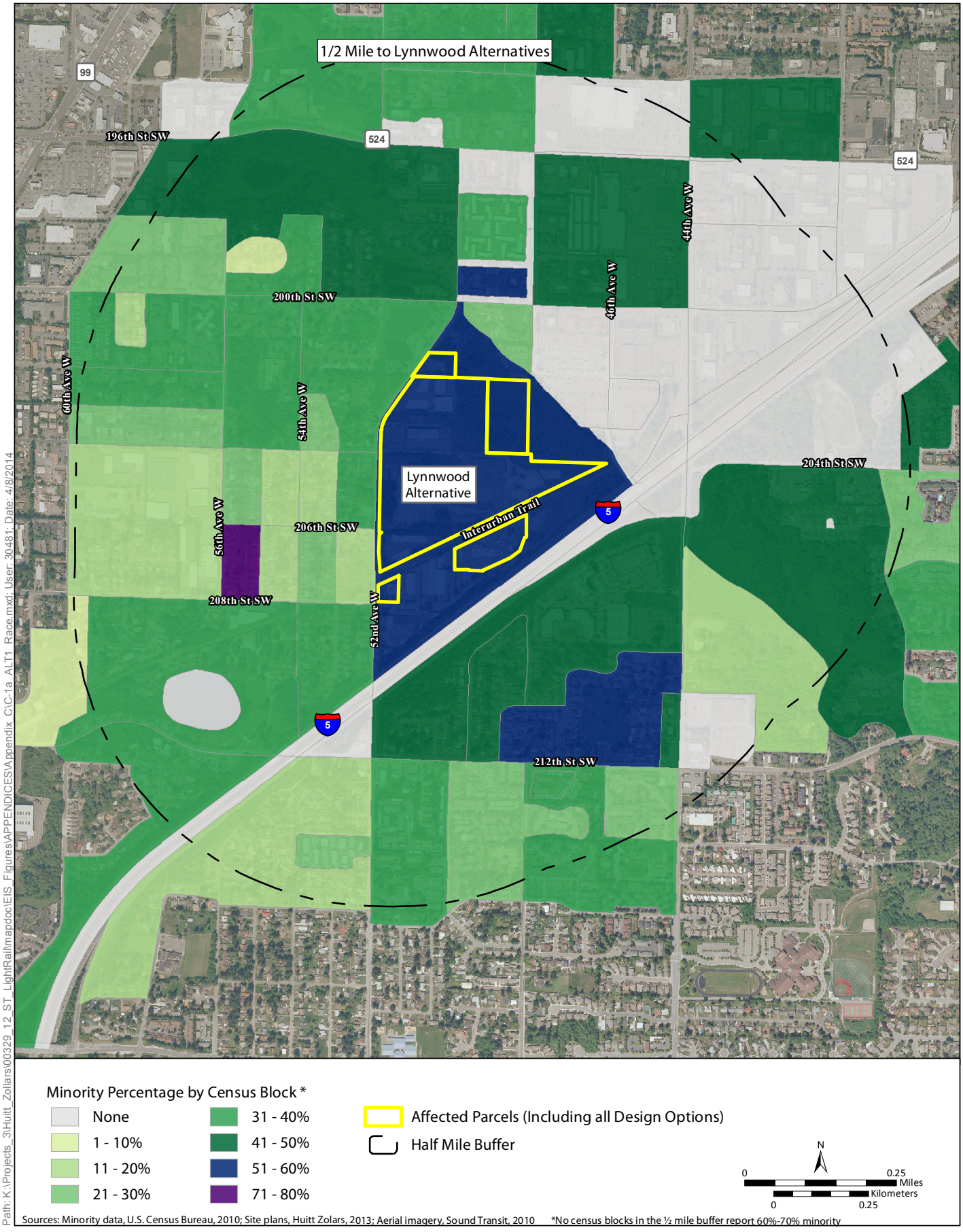

Figure C-1a: Lynnwood Alternative—Minority Percentage by Census Block
Sound Transit Link Light Rail OMSF Draft EIS

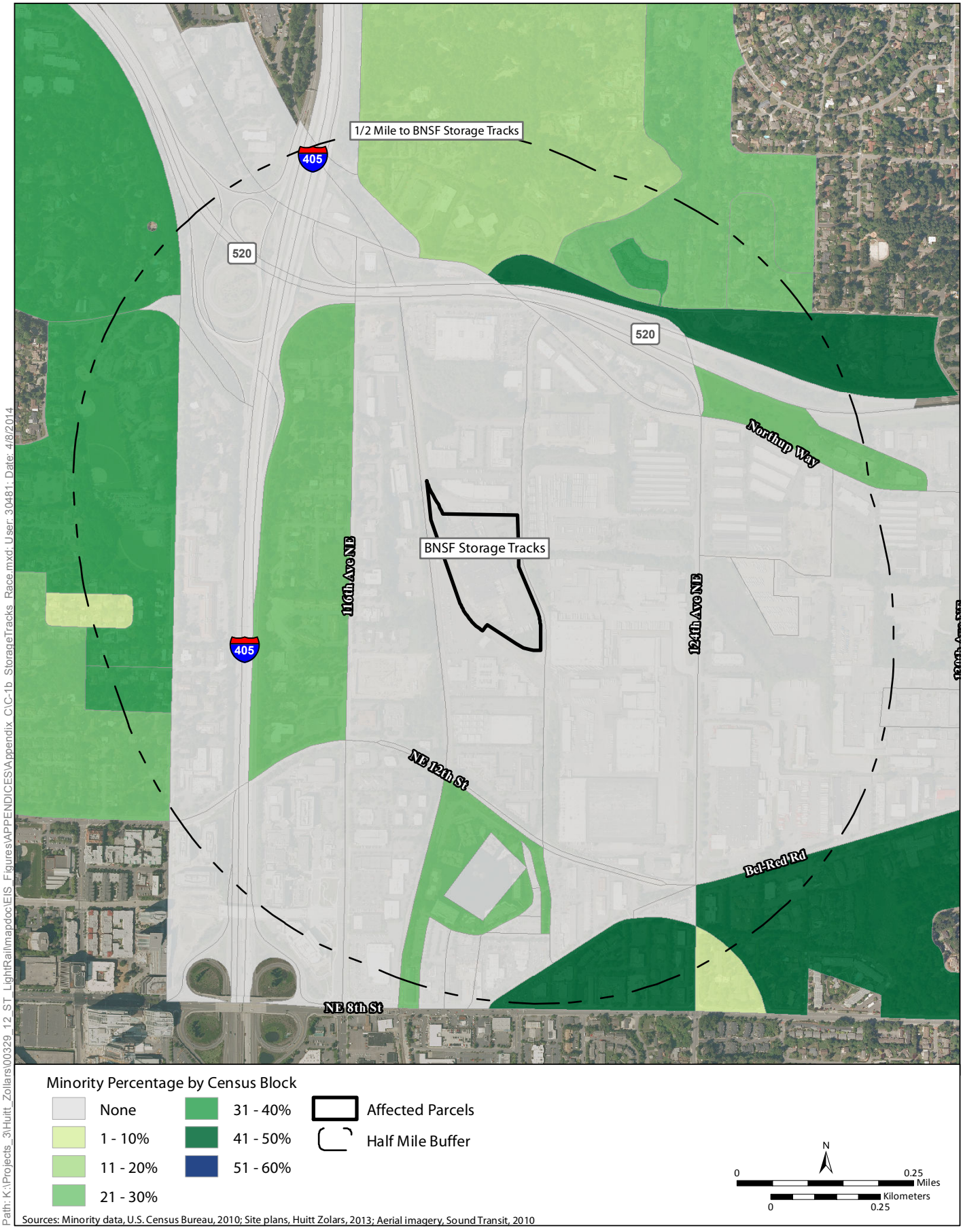

Figure C-1b: Lynnwood Alternative, BNSF Storage Tracks*—Minority Percentage by Census Block
Sound Transit Link Light Rail OMSF Draft EIS
*The BNSF Storage Tracks are located in Bellevue

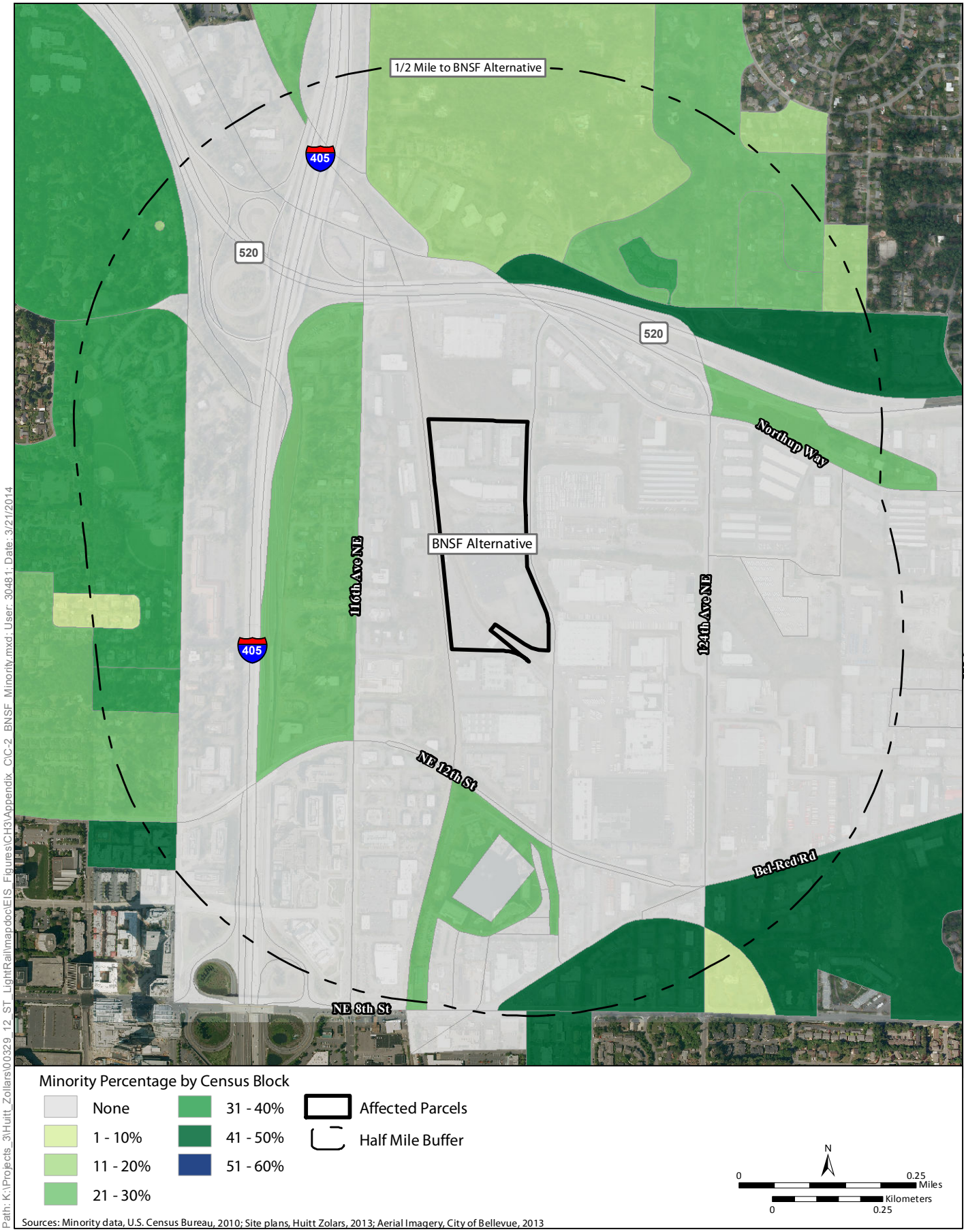

Figure C-2: BNSF Alternative—Minority Percentage by Census Block
Sound Transit Link Light Rail OMSF Draft EIS

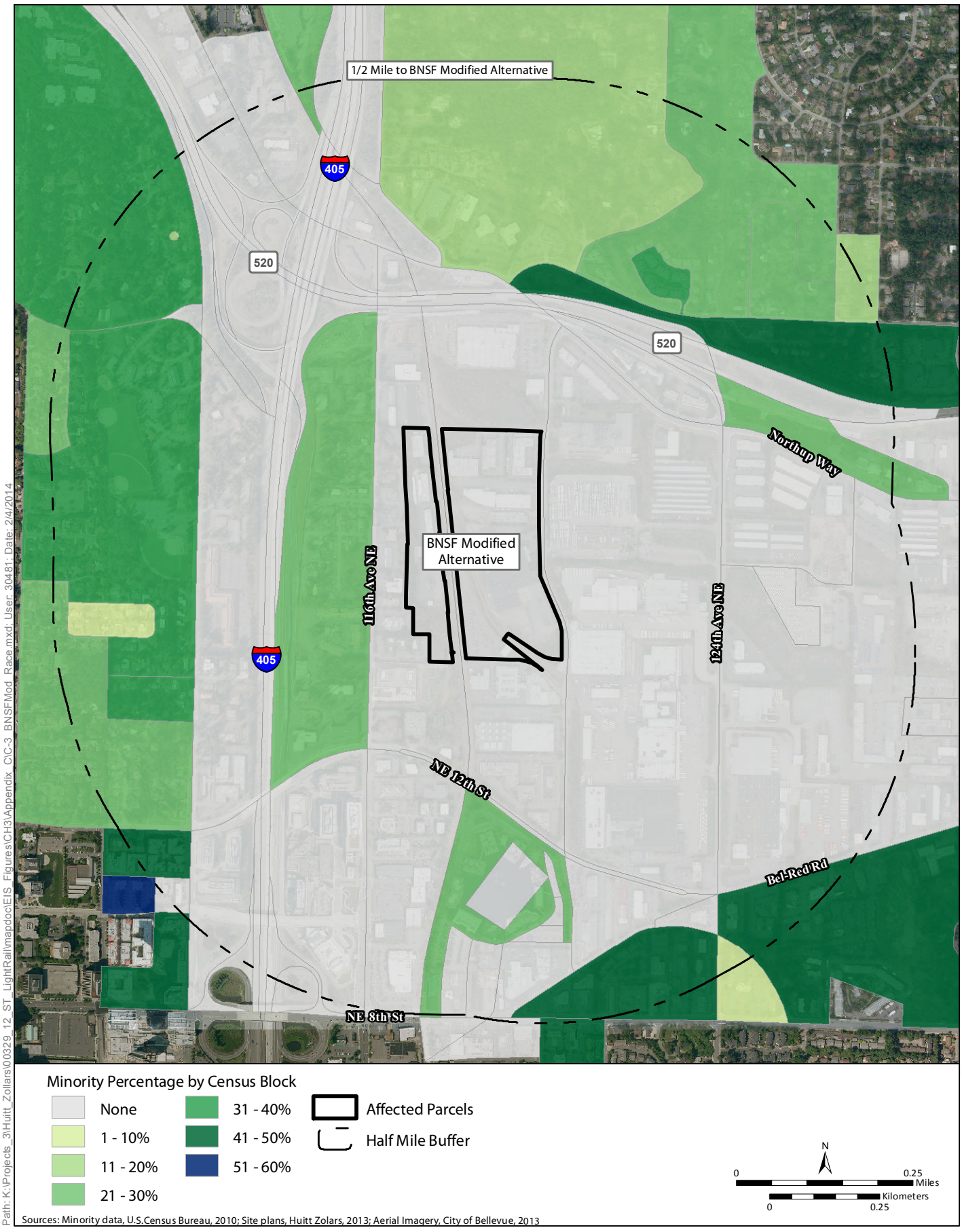

Figure C-3: BNSF Modified Alternative—Minority Percentage by Census Block
Sound Transit Link Light Rail OMSF Draft EIS

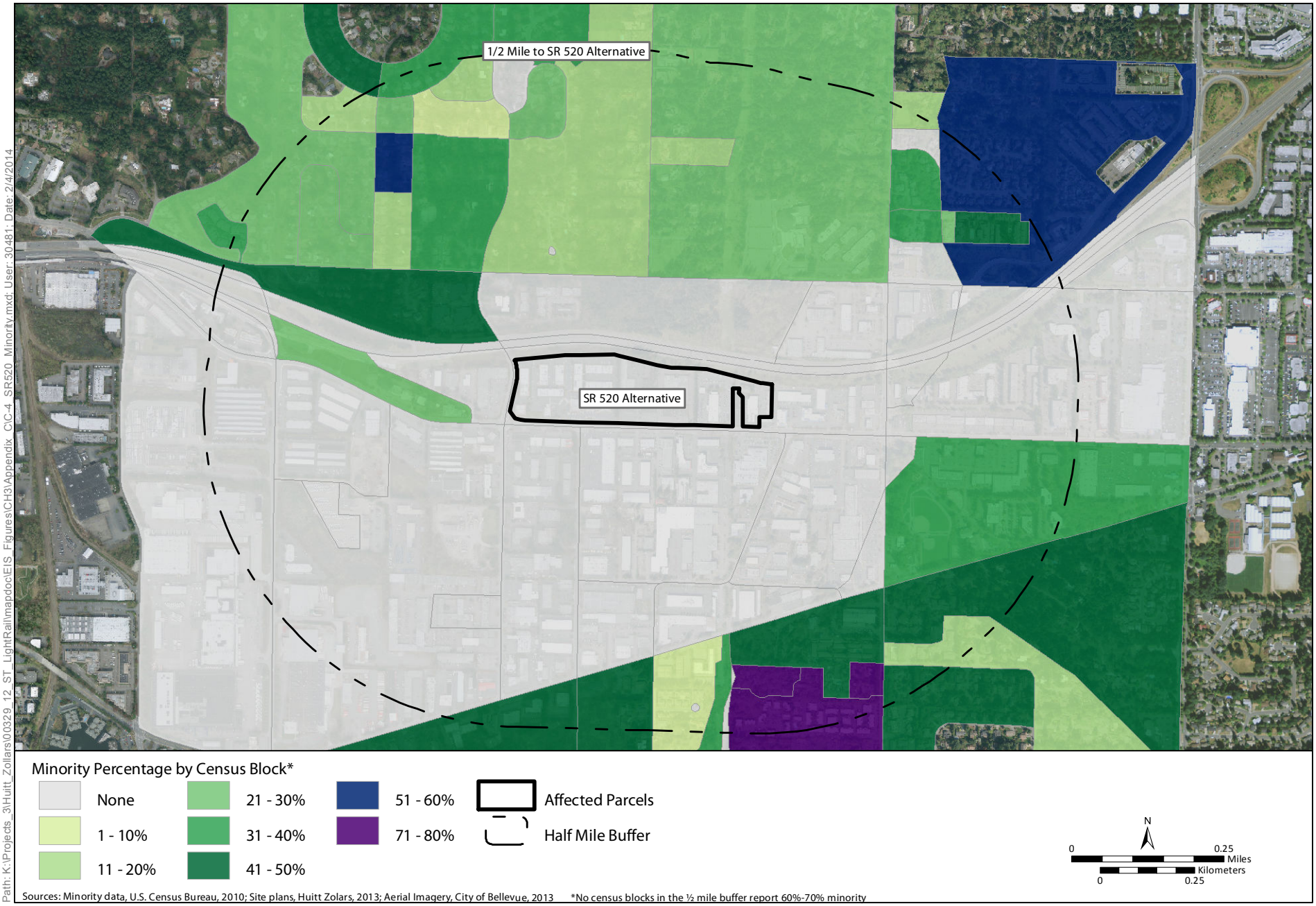

Figure C-4: SR 520 Alternative—Minority Percentage by Census Block
Sound Transit Link Light Rail OMSF Draft EIS

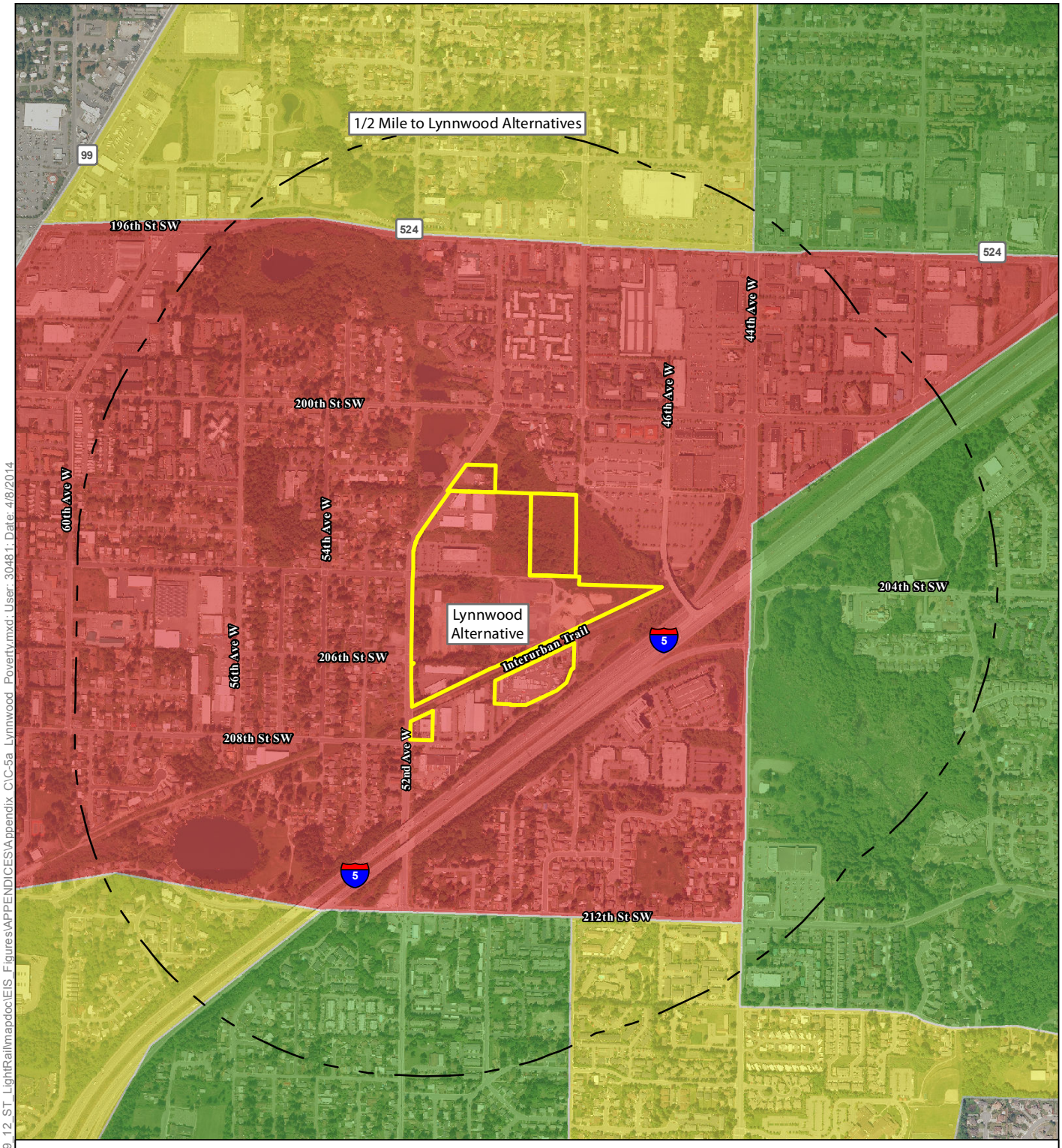

Figure C-5a: Lynnwood Alternative—Percentage Below Poverty Line by Census Tract
Sound Transit Link Light Rail OMSF Draft EIS

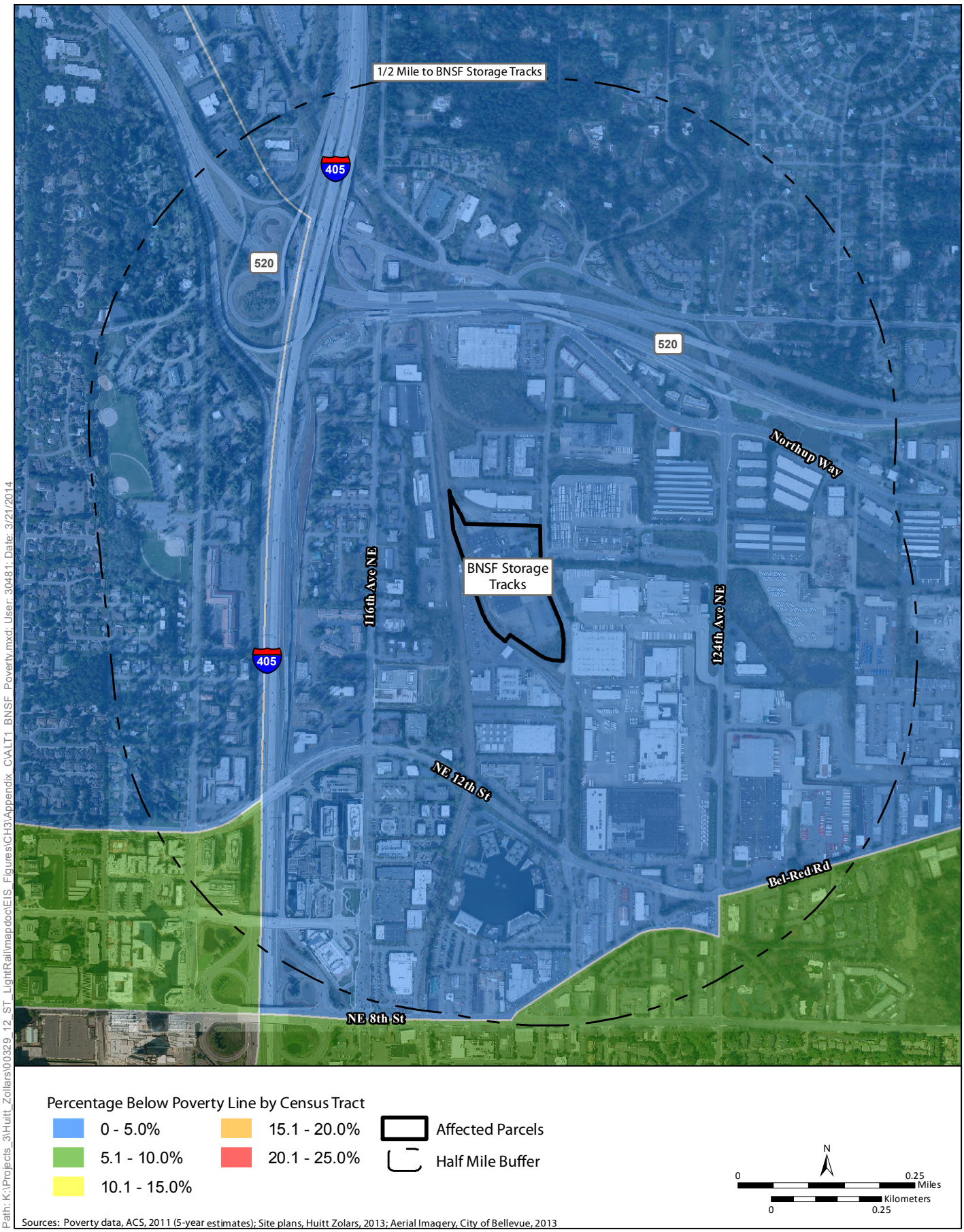

Figure C-5b: Lynnwood Alternative, BNSF Storage Tracks*—Percentage Below Poverty Line by Census Tract
Sound Transit Link Light Rail OMSF Draft EIS
*The BNSF Storage Tracks are located in Bellevue

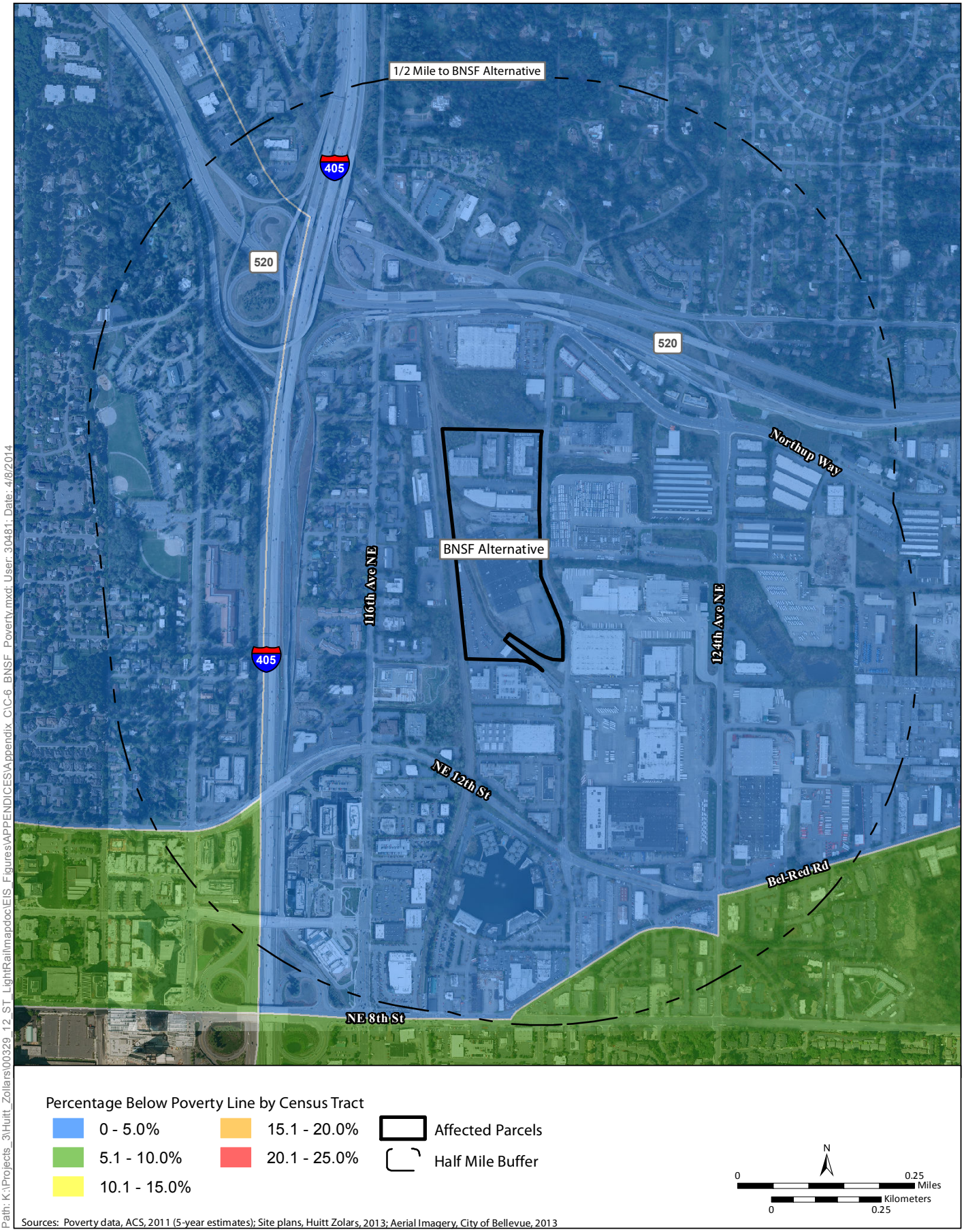

Figure C-6: BNSF Alternatvie—Percentage Below Poverty Line by Census Tract
Sound Transit Link Light Rail OMSF Draft EIS

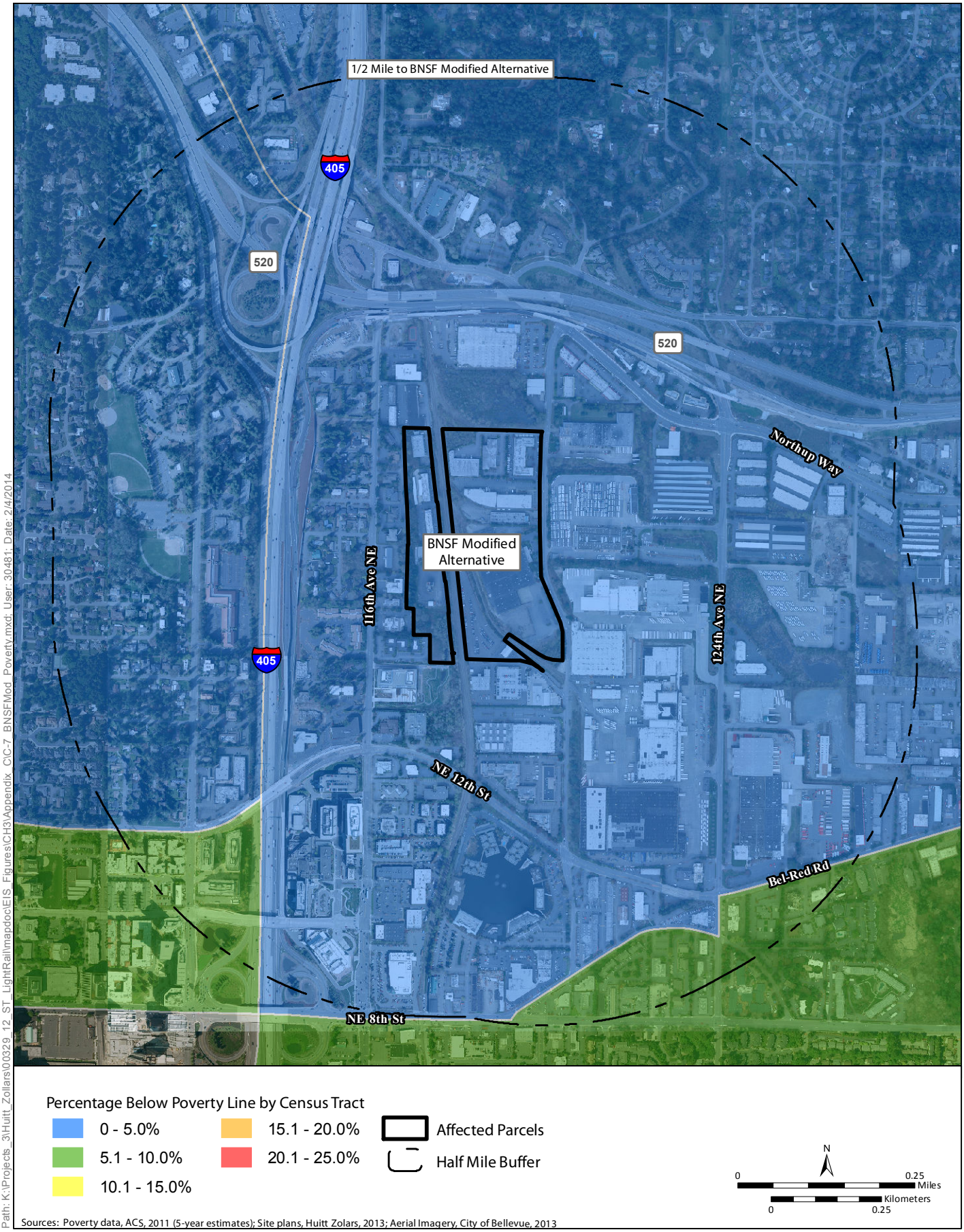

Figure C-7: BNSF Modified Alternative—Percentage Below Poverty Line by Census Tract
Sound Transit Link Light Rail OMSF Draft EIS

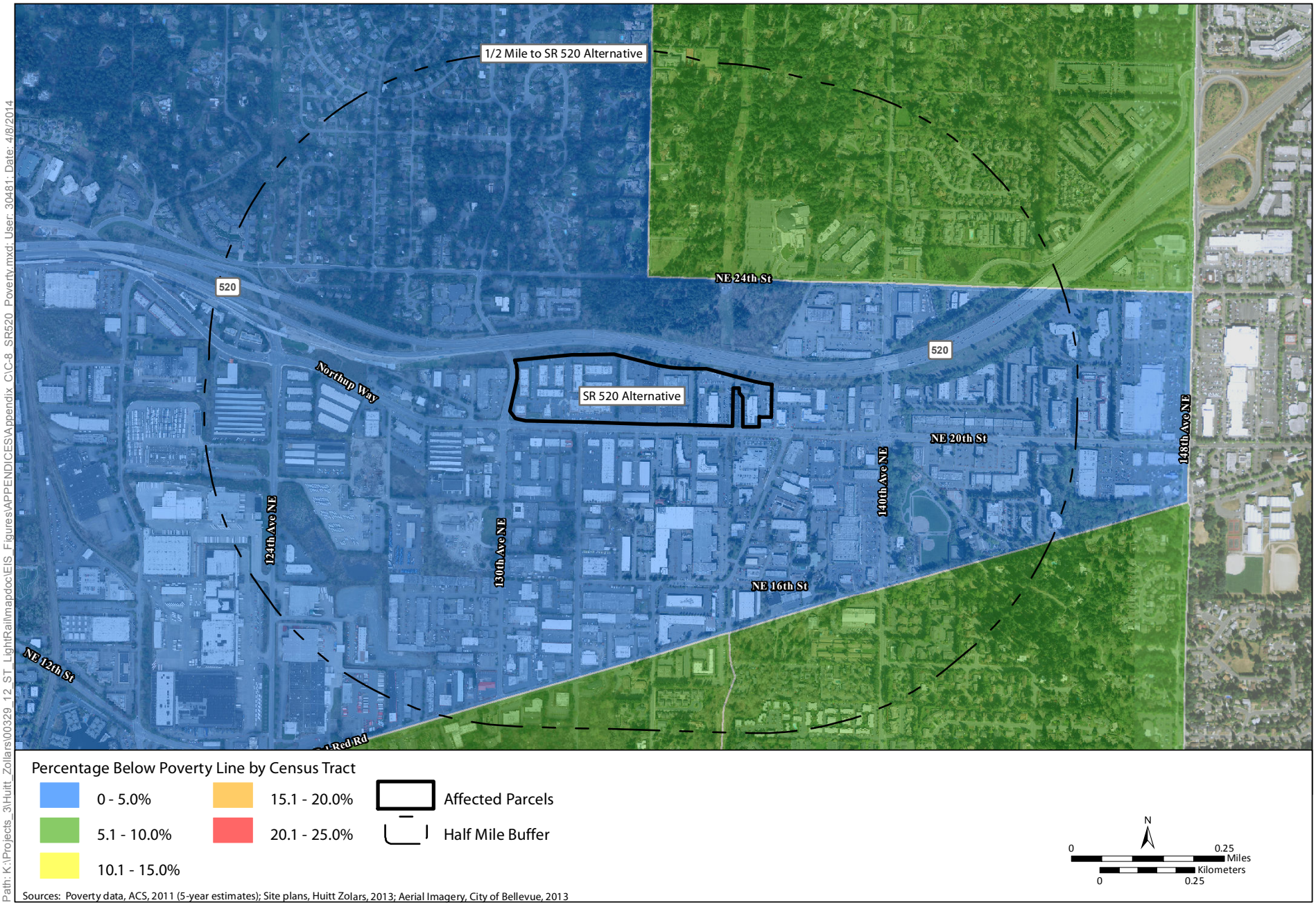

Figure C-8: SR 520 Alternative—Percentage Below Poverty Line by Census Tract
Sound Transit Link Light Rail OMSF Draft EIS

The SR 520 Alternative site contains a strip mall which houses multiple businesses that appear to serve an ethnic population. Among them, the Cornerstone Church which is an Asian American ministry maintains its administrative office in the strip mall located on the SR 520 Alternative site. A Chinese language church, Seattle Formosan Christian Church, maintains an activity and small scale ministry in the strip mall as well. Other businesses include Persepolis Specialties Café, a Persian grocer and deli; Cathay Bank, a Chinese-American bank; and several Asian acupuncture clinics and Chinese herbalist/medicine stores. It is likely that some of these businesses and churches are minority owned as evidenced by the Chinese language signage and advertising along store frontages.

As shown in Figure C-5a, 20 to 25% of residents in the Lynnwood Alternative study area generally between Pacific Highway and 44th Avenue W, consist of low-income populations. More specifically, Census tract 514, which includes the Lynnwood Alternative site, exhibited a proportion of low-income residents with an estimated 23% at or below the poverty level in 2011. Generally, the study areas for the BNSF Alternative, BNSF Modified Alternative, and SR 520 Alternative have 10% or less low-income residents.

Outreach to Minority and Low-Income Populations

As part of proposed project public outreach, Sound Transit has made it a priority to engage diverse minority and low-income populations throughout the planning and development process by providing materials and making them available in multiple formats. Public participation is a key component of EO 12898 and the DOT Order. Sound Transit has developed numerous events and tools to successfully engage and communicate with the public, including scoping meetings, workshops, fact sheets/handouts, posters, display advertisements, stakeholder briefings, and a project website that is regularly updated throughout the proposed project. Public involvement in the proposed project is described in Appendix B, *Public and Agency Involvement*.

Before scoping, Sound Transit reviewed the minority and income characteristics of the population in the proposed project vicinity to identify minority and low-income populations. Based on this information, public involvement has included, and will continue to include, outreach at key milestones specific to those groups using the public involvement tools developed by Sound Transit.

Sound Transit provided postcard notices and online and printed advertisements to notify and engage the public and agencies during the environmental scoping process. Specifically, Sound Transit sent postcard notices to 57 government and community relations stakeholders, 88 social service organizations, and over 11,400 addresses located within 0.5 mile of the build alternative sites. Postings and advertising for the public scoping meeting were posted to numerous online and print media including non-English publications such as the *La Raza*, *Russian Reklama*, and *Seattle Chinese Post*.

Since the scoping period closed, Sound Transit distributed updated project information via mailers for other Sound Transit projects, such as East Link and Lynnwood Link Extension, and approximately

1,500 OMSF subscribers received E-newsletters. Mailers were also sent out to update stakeholders on proposed project progress. Language translations for proposed project notices and literature were offered in Chinese Mandarin, Hindi, Japanese, Korean, Russian, Spanish, and Vietnamese.

Public involvement and outreach actions targeted at minority and low-income populations, as defined under the DOT Order, include the following efforts.

- Perform continued consultation with key community organizations for assistance in outreach to minority and low-income individuals.
- Provide agency and project-specific information to key community organizations that serve the minority and/or low-income populations prevalent in the areas to be served by or in the vicinity of the proposed project.
- Present project information at meetings held at community venues in locations with minority and/or low-income populations likely to be served by the proposed project and/or directly affected by construction activities.
- Provide publication-specific translated language blocks, in Chinese Mandarin, Hindi, Japanese, Korean, Russian, Spanish, and Vietnamese on outreach materials produced for the proposed project.
- Offer interpretation services for all public meetings for deaf and non-English speaking community members.
- If Sound Transit is contacted by anyone who has limited use of English, Sound Transit staff can access an immediate over-the-phone interpretation service provided by Telelanguage, a full-service language interpretation and translation company that provides interpretation in 150 languages, 24 hours a day and 7 days a week.

Scoping Meetings

Sound Transit began the EIS process with two public scoping meetings and one agency/tribal meeting held during the scoping period which took place from September 17 to October 22, 2012. The public scoping meetings were held at the Highland Community Center in Bellevue and the Lynnwood Convention Center, with attendance totaling approximately 100 people between the two meetings. The meetings consisted of an "open house" format combined with a brief presentation and a question and answer session. Meetings had sign-in areas, comment forms, and information stations with displays and background materials. Project staff members were available to listen and answer participant's questions.

Issues raised during the scoping meetings included business displacements, compatibility with land uses, concerns about property values, safety, noise, light and glare, visual impacts, parks and trail impacts, relationship between the proposed project and the East Link and Lynnwood Link Extension project, and the process by which potential sites were identified. In addition, comments received during the scoping process expressed concerns that impacts related to the Lynnwood Alternative site would disproportionately affect low-income and minority residents.

Project Impacts and Mitigation

The DOT Order requires agencies to explicitly consider human health and environmental effects related to transportation projects that may have a disproportionately high and adverse effect on minority or low-income populations. Section 8.b of the DOT Order allows for mitigation and enhancement measures to be taken into consideration when determining project impacts. Table C-1 summarizes the impacts identified in the elements that have been analyzed for the EIS and that can be differentially distributed, as well as any mitigation that would reduce or eliminate the impacts. Generally, the proposed project would result in impacts that would affect all populations to the same degree. No residential properties would be acquired or relocated under any alternative. Residential uses are closer to the Lynnwood Alternative study area when compared to other alternatives and the Lynnwood Alternative site contains a relatively smaller minority population as compared to the other alternative sites, but has a higher percentage of low-income residents than the other alternative sites. Residential properties adjacent to the Lynnwood Alternative study area would have increased noise, regardless of which Lynnwood Link Extension alignment is built, but those noise impacts would be effectively mitigated below impact threshold levels established by FTA and the local jurisdiction.

The Lynnwood Alternative would require the acquisition and displacement of the Department of Social and Health Services (DSHS) offices located at 20311 52nd Avenue W. Services at this location include disability assistance offices, vocational education services, and employment assistance offices. These DSHS offices have multiple locations throughout the State and Snohomish County. It is anticipated that there is adequate availability of similar office buildings in the City of Lynnwood, such that the population would be adequately served by the relocated DSHS offices. The relocation of these offices to a similar facility within the City of Lynnwood would not result in a lack of social service provider offices in the City of Lynnwood or in the greater region. Accordingly, disproportionately high and adverse impacts on the environmental justice populations within the Lynnwood study area would not occur.

Of the approximate 101 businesses that may be displaced under the SR 520 Alternative, approximately six of these as well as two church-associated facilities (Seattle Formosan Christian Church – Eastside Facility and Cornerstone Church administrative offices) serve an Asian community from the surrounding area. Neither church facility is a primary location of worship. The Cornerstone Church facility serves as the administrative office for the Cornerstone Church which holds service at Lake Hills Elementary School located approximately 1.9 mile away from the Alternative. The Formosan facility provides weekend youth activities to its congregation members; however, its primary location is 333 NE 76th Street approximately 8.4 miles away in Seattle. It is likely that the church facilities and businesses on the site could be relocated. While some of the businesses may be minority owned, displaced business owners would be compensated equally to other business owners such that the impact would not be disproportionately high and adverse. All impacts associated with the proposed project would be effectively mitigated. Complete information on the project impacts is provided in Chapter 3, Affected Environment and Environmental Consequences, of the Draft EIS.

Project Benefits

Under the DOT Order, the benefits of a proposed transportation project may be taken into account when determining whether any disproportionately high and adverse effects on minority and low-income populations would occur. The OMSF would have the indirect benefit of facilitating operation of the expanded Sound Transit Link light rail system to the Lynnwood Transit Center, Overlake Transit Center, and the Kent/Des Moines area at planned service levels. This would, in turn, improve regional connectivity and mobility and provide a reliable means of transportation for populations reliant on public transit including low-income and minority populations. While all populations within the project's service area would realize these benefits to the same extent, they could accrue to a higher degree on minority and low-income residents as a primary and affordable means of transportation.

Conclusion

As described above and in Table C-1, which follows, the proposed project (under any build alternative) would not result in any effects that would be considered high and adverse under EO 12898 and the DOT Order. Project impacts would be mostly limited in scope and others would be mitigated through implementation of effective mitigation measures. Indirect benefits of the proposed project would include improving regional connectivity by a reliable, efficient, and affordable means of transportation for populations reliant on public transit. Because the proposed project would not result in disproportionately high and adverse effects, further analysis of the minority and income characteristics of effected populations is not warranted.

Table C-1. Summary of Potential Impacts and Mitigation

Environmental Resource	Impact Summary for Build Alternatives	Potential Mitigation Summary
Transportation	Noticeable construction-related traffic along surrounding roadways. In the long-term, there would be a net reduction in trips, and the project is beneficial for all populations who use transit, including minority and low-income populations. Each build alternative would result in additional parking demand.	Construction transportation management plan. No long-term mitigation required.
Acquisitions, Displacements, and Relocations	No residential relocations would occur under any of the alternatives. Each alternative would result in acquisition and displacement of industrial and commercial properties. DSHS social service provider offices would be displaced under the Lynnwood Alternative. Under the SR 520 Alternative, various businesses and two church-affiliated facilities (administrative offices) serving an Asian community would be displaced.	Property owners and displaced businesses would receive compensation and relocation assistance consistent with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, the state of Washington's relocation and property acquisition law and regulations (Washington Administrative Code [WAC] 468-100 and Revised Code of Washington [RCW] 8.26), and Sound Transit's adopted *Real Estate Property Acquisition and Relocation Policy, Procedures, and Guidelines* (Resolution #R98-20-1).
Land Use	All build alternatives would convert existing uses to transportation-related uses. Acquisitions under all build alternatives would represent only a small portion of the land available in the study area, and some excess property acquired could be sold and redeveloped after construction. All build alternatives would be consistent with regional plans and polices, but would be inconsistent with local jurisdictions' adopted plans and would require conditional use approvals based on local comprehensive plan and zoning designations. The Lynnwood Alternative would also require an amendment to the City of Lynnwood's comprehensive plan.	None required.

Environmental Resource	Impact Summary for Build Alternatives	Potential Mitigation Summary
Economics	All build alternatives would result in business and employee displacements; however, it is expected that business displacements would be relocated and, therefore, no long-term impacts on employees are anticipated. All build alternatives would result in property tax reductions from the conversion of existing uses to tax-exempt, transportation-related uses. All build alternatives would also result in increased expenditures for construction materials and associated sales tax revenues as well as increased demand for construction workers. Construction of all build alternatives would result in temporary impacts on traffic circulation, noise, vibration, and visual effects.	See mitigation for Transportation, Noise and Vibration, and Acquisitions, Displacements, and Relocations.
Social Impacts, Community Facilities, and Neighborhoods	Construction could temporarily affect neighborhood quality through temporary increases in noise, dust, and traffic. Construction of the Lynnwood Alternative would also temporarily alter access to the Interurban Trail, which provides a connection between the study area and neighborhoods south of the Lynnwood Alternative site. The Lynnwood Alternative would displace Washington State Department of Health and Social Services Offices.	See potential mitigation for Noise and Vibration, Air Quality and Greenhouse Gases, Transportation, Parklands and Open Space, and Acquisitions, Displacements, and Relocations.
Visual and Aesthetic Resources	Each build alternative would result in visual changes, such as visibility of the OMSF from nearby properties and roadways. These changes would not degrade the existing visual quality. The Lynnwood Alternative site would be visible from the Interurban Trail and Scriber Creek Park, which have moderate sensitivity to visual changes. However, the change experienced would not be substantial.	None required.

Environmental Resource	Impact Summary for Build Alternatives	Potential Mitigation Summary
Air Quality and Greenhouse Gases	Construction of the build alternatives would result in minor amounts of construction–related criteria pollutants and greenhouse gas emissions. Operation of the build alternatives would consume natural gas and electricity and result in increases in air pollutant emissions related to employee vehicles commuting to and from the site. Increases in greenhouse gas emissions are not anticipated to exceed the National Ambient Air Quality Standards.	Best management practices would prevent and reduce fugitive dust emissions resulting from construction.
Noise and Vibration	Noise impacts on nearby residents resulting from Design Options C1 and C2 would be mitigated under the Lynnwood Alternative. No noise impacts would result for the other build alternatives.	Noise and vibration impacts would be mitigated. Mitigation could include special trackwork.
Ecosystems	None of the build alternatives would result in adverse effects on threatened or endangered species. All build alternatives would have wetland impacts and/or the loss of high-value habitat. The SR 520 Alternative would require piping a portion of Goff Creek.	Best management practices would be implemented during construction to avoid and minimize impacts on vegetation and wildlife, aquatic resources, and wetlands. Areas used during construction would be revegetated. Project design measures would avoid and minimize impacts on environmentally sensitive resources and provide compensatory mitigation measures where adverse impacts would be unavoidable.
Water Resources	All build alternatives would increase the amount of existing impervious surface area. Erosion of soil would occur due to construction, which may increase sedimentation in nearby streams. Placement of fill would be required in a 100-year floodplain under the Lynnwood Alternative.	Construction best management practices, including the preparation of a temporary erosion and sediment control plan; spill prevention, control, and countermeasures plan; concrete containment and disposal plan; dewatering plan; and fugitive dust plan would minimize impacts such that no additional mitigation measures would be required. Flood-hazard mitigation would be determined based on a flood analysis for the Lynnwood Alternative.
Energy	All build alternatives would result in an increase in energy consumption, but this increase would represent a minute portion of SnoPUD's and PSE's total energy resources and there would be sufficient capacity to accommodate the increase in energy consumption.	None.

Environmental Resource	Impact Summary for Build Alternatives	Potential Mitigation Summary
Geology and Soils	All build alternative sites are located in a seismically active area that creates hazards related to ground shaking and liquefaction. All build alternatives would require alteration to existing topography including import and export of fill material. The SR 520 Alternative site would be adjacent to a relatively steep fill embankment that supports SR 520. A slope stability analysis would be conducted prior to construction.	Implementation of design standards and best management practices for soil erosion control, slope stability, geotechnical engineering design, and construction.
Hazardous Materials	Construction of all build alternatives would involve the routine use, storage, and disposal of hazardous materials such as fuels, solvents, paints, oils and grease. Construction impacts could also result from encountering contaminated soil or groundwater. Two hazardous materials sites (one medium risk and one low risk) are located in the Lynnwood Alternative site. One high-risk site is located in the BNSF Storage Tracks component of the Lynnwood Alternative and the BNSF Alternative and BNSF Modified Alternative sites. OMSF operational activities would generate hazardous material waste due to the use of lubricants, solvents, etc.	Plans governing handling of hazardous materials and spill response would be implemented during construction and operation. Contractors would be required to develop project-specific plans to implement best management practices to ensure management of hazardous materials during construction is consistent with state and federal regulations. A level of due diligence appropriate to the site and presumed past use of property would be completed before property is acquired.

Environmental Resource	Impact Summary for Build Alternatives	Potential Mitigation Summary
Electromagnetic Fields	None of the build alternatives would affect facilities sensitive to electromagnetic fields.	None required.
Public Services	All build alternatives have the potential to affect emergency response times during construction due to construction-related traffic. The build alternatives are not expected to result in any negative impacts on overall crime rates in the surrounding neighborhoods. The Lynnwood Alternative would use property on which the Edmonds School District intends to construct a district support center. The BNSF Modified Alternative would displace the Bellevue Public Safety Training Center.	Property owners and displaced businesses would receive compensation and relocation assistance consistent with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, the state of Washington's relocation and property acquisition law and regulations (Washington Administrative Code [WAC] 468-100 and Revised Code of Washington [RCW] 8.26), and Sound Transit's adopted *Real Estate Property Acquisition and Relocation Policy, Procedures, and Guidelines* (Resolution #R98-20-1).
Utilities	Construction impacts would include relocating utility poles that support overhead lines; relocating aerial utilities to taller or different types of poles; constructing new distribution lines to provide power to substations; relocating underground utilities from under the build alternative sites; and inspecting, repairing, and encasing underground utilities at yard track crossings. Each build alternative would result in negligible increases in demand for natural gas, electricity, and water. However, no long-term impacts on natural gas, electricity, telephone, telecommunications, water, or wastewater are expected under any of the build alternatives.	None required.
Historic and Archaeological Resources	No adverse impacts on archaeological resources or traditional cultural properties. No historic buildings or structures would be affected.	Develop Inadvertent Discovery Plan prior to ground-disturbing activities.
Parklands and Open Space	The Lynnwood Alternative would require temporary closure of the Interurban Trail during construction. The OMSF lead track would cross over the Interurban Trail, which would change the visual character at the trail, but would not result in a substantial change to the visual environment.	For temporary trail closures during construction, Sound Transit would coordinate with the City of Lynnwood to provide public information and signed detour routes to allow for continued connections and user safety.

Appendix D

Section 4(f) and 6(f) Evaluation

Appendix D
Section 4(f) and Section 6(f) Evaluation

Introduction

This appendix provides documentation necessary to support the Federal Transit Administration's (FTA) determinations related to 23 Code of Federal Regulations (CFR) Part 774, which implements legislation originally enacted as Section 4(f) of the Department of Transportation Act of 1966 and is still commonly referred to as *Section 4(f)*. Section 4(f) properties are publicly owned lands of a park, recreational area, or wildlife and waterfowl refuge or land of a historical site of national, state, or local significance as determined by the federal, state, regional, or local officials having jurisdiction over the resource.

Potential effects on properties protected under Section 6(f) of the Land and Water Conservation Fund (LWCF) Act of 1965 (hereinafter referred to as *Section 6(f)*) are also addressed. Section 6(f) properties are recreational resources acquired or improved with funding through the LWCF Act. Land purchased with these funds cannot be converted to a nonrecreational use without coordination with the National Park Service (NPS) and mitigation that includes replacing the quality and quantity of land used. Converting any portion of these lands follow 36 CFR 59.3 of the LWCF Program. The records of grants under the LWCF, which are maintained by the Washington State Recreation and Conservation Office, were reviewed to confirm that there are no properties within the study area that were developed with LWCF funds. No further evaluation is needed for the project to comply with Section 6(f) requirements (National Park Service 2013).

This appendix addresses impacts, mitigation and avoidance alternatives on Section 4(f) resources. Only those Section 4(f) resources that could be affected by the proposed project are addressed in this analysis. Information on publicly owned parklands, recreation lands, wildlife and waterfowl refuges, and historic sites is provided in Section 3.17, Historic and Archaeological Resources, and Section 3.18, Parkland and Open Space.

As amended March 2008, 23 CFR 774 addresses the use of Section 4(f) resources by projects proposed or funded by FTA. It describes that the Administration may not approve the use of publicly owned land of a public park, recreational area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge or site), unless a determination is made under paragraph (a) or (b) of §774.3 as follows.

(a) The Administration determines that

(1) There is no feasible and prudent avoidance alternative, as defined in §774.17, to the use of land from the property; and

(2) The action includes all possible planning, as defined in §774.17, to minimize harm to the property resulting from such use; or

> (b) The Administration determines that the use of the property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) committed to by the applicant, will have a de minimis impact, as defined in §774.17, on the property.
>
> (c) If the analysis in paragraph (a)(1) of this section concludes that there is no feasible and prudent avoidance alternative, then the Administration may approve, from among the remaining alternatives that use Section 4(f) property only the alternative that:
>
> (1) Causes the least overall harm in light of the statute's preservation purpose.
>
> (2) The alternative selected must include all possible planning, as defined in §774.17, to minimize harm to Section 4(f) property.

The proposed project, which is evaluated in the draft environmental impact statement (Draft EIS), is a transportation project that might receive federal funding and/or discretionary approvals through the U.S. Department of Transportation (USDOT) (e.g., Federal Transit Administration [FTA]); therefore, documentation of compliance with Section 4(f) is required. In addition, this evaluation incorporates Section 6009(a) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Publication L, 109-59. This act amended existing Section 4(f) legislation at 138 U.S. Code (USC) 23 and 303 USC 49 to simplify the processing and approval of projects that have only *de minimis* impacts on properties protected by Section 4(f). For the proposed project, FTA is the lead federal agency, which makes the final determination on *de minimis* for a particular resource.

A finding of *de minimis* may occur when all possible planning to minimize harm by reducing the impacts on the Section 4(f) property to *a de minimis* level such that the project does not adversely affect Section 4(f) resources [23 CFR §774.3(b)]. When a finding of *de minimis* can be reached, an analysis of feasible and prudent avoidance alternatives is not required (23 CFR §774.17). The following criteria must be met to conclude a *de minimis* finding.

- For parks, recreational areas, and wildlife and waterfowl refuges, a *de minimis* finding may be made only if the following apply [23 CFR § 774.5(b)].
    - Public notice and an opportunity for public review and comment concerning the effects on the protected activities, features, or attributes of the property must be provided. This requirement can be satisfied in conjunction with other public involvement procedures, such as a comment period provided on a National Environmental Policy Act (NEPA) document.
    - The Administration shall inform the official(s) with jurisdiction of its intent to make a *de minimis* impact finding. Following an opportunity for public review and comment as described in paragraph (b)(2)(i) of this section, the official(s) with jurisdiction over the Section 4(f) resource must concur in writing that the project will not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection.
- For a historic site, a *de minimis* finding might be made only if, in accordance with the Section 106 process of the National Historic Preservation Act of 1966 (NHPA) and written concurrence from the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO), and from the Advisory Council on Historic Preservation (ACHP), if participating in the consultation process, it is found that the transportation program or project will not affect

historic properties or have no adverse impact on historic properties. FTA shall inform these officials of its intent to make a *de minimis* impact determination based on their concurrence in the finding of "no adverse effect" or "no historic properties affected."

Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties. In this Draft EIS, Section 3.17, Historic and Archaeological Resources, and Appendix E.4, *Cultural Resources Technical Report*, document these resources and potential effects.

This evaluation accomplishes the following.

- Identifies Section 4(f) resources within the vicinity of the build alternative sites.
- Assesses whether build alternatives would result in use of a 4(f) resource.

Proposed Project

The Sound Transit Link Operations and Maintenance Satellite Facility (OMSF) project (proposed project) supports expansion of the Sound Transit Link Light Rail system. Four build alternatives are under consideration in various locations within the Cities of Lynnwood and Bellevue. This evaluation was prepared in conjunction with the Draft EIS for the proposed project. Chapter 1, Purpose and Need for the Project, and Chapter 2, Alternatives Considered, of the Draft EIS, provide the complete description of the proposed project, and Chapter 2 also illustrates the alternatives considered in this report. Sections 3.17 and 3.18 of the Draft EIS describe the historic properties and park and recreational resources in the study area, respectively.

Definition of Section 4(f) Use

Per 23 CFR 774.11, Section 4(f) applies only to those portions of such lands which function for, or are designated in the plans of the administering agency as being for, significant park, recreation, or wildlife and waterfowl refuge purposes as determined by the official(s) with jurisdiction over the Section 4(f) resource. The Section 4(f) requirements apply to historic sites (both structures as well as archaeology sites) listed or eligible for listing in the National Register of Historic Places (NRHP) and those portions of the U.S. Interstate System formally identified by Federal Highway Administration (FHWA) for Section 4(f) protection based on national or exceptional historic significance. Impacts on Section 4(f) resources, or properties, occur when there is a "use" of the properties. Such impacts can consist of either a direct or a constructive use of the properties, as defined in the following subsections. The 4(f) resource must be publicly owned at the point at which "use" occurs. As defined in 23 CFR 774.17, "use" of a protected Section 4(f) resource occurs when one or more of the following occur.

- Land is permanently incorporated into a transportation facility (e.g., direct use).
- There is a temporary occupancy of land that is adverse in terms of the preservationist purposes (e.g., temporary use).

- There is no permanent incorporation of land, but the proximity of a transportation facility results in impacts so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired (e.g., constructive use).

Direct Use

A direct use of a Section 4(f) resource takes place when property is permanently incorporated into a proposed transportation facility (23 CFR 774.17). This might occur as a result of partial or full acquisition, permanent easements, or temporary easements that exceed regulatory limits noted below.

Temporary Use

A temporary use of a Section 4(f) resource occurs when the property is temporarily occupied and that occupancy is considered adverse in terms of the preservationist purposes of the Section 4(f) statute. Under the FTA/FHWA regulations (23 CFR 774.13[d]), a temporary occupancy of property does not constitute a use of a Section 4(f) resource when the following conditions are satisfied.

- The occupancy must be of temporary duration (e.g., shorter than the period of construction) and must not involve a change in ownership of the property.
- The scope of work must be minor, with only minimal changes to the protected resource.
- There must be no permanent adverse physical impacts on the protected resource or temporary or permanent interference with activities or purpose of the resource.
- The property being used must be fully restored to a condition that is at least as good as existed prior to the proposed project.
- There must be documented agreement of the appropriate officials having jurisdiction over the resource regarding the foregoing requirements.

Constructive Use

A constructive use of a Section 4(f) resource occurs when a transportation project does not permanently incorporate land from the resource, but the project's proximity results in impacts (e.g., noise, vibration, visual, access, and/or ecological impacts) so severe that the protected activities, features, or attributes that qualify the resource for protection under Section 4(f) are substantially impaired (23 CFR 774.15). Substantial impairment occurs only if the protected activities, features, or attributes of the resource are substantially diminished.

A constructive use test to determine whether the resources are substantially diminished is defined in 23 CFR 774.15(d) and summarized as follows.

- Identifying the current activities, features, or attributes of the resource that might be sensitive to proximity impacts.

- An analysis of the proximity impacts of the proposed project on the Section 4(f) property. If any of the proximity impacts will be mitigated, only the net impact need be considered in this analysis. The analysis should also describe and consider the impacts which could reasonably be expected if the proposed project were not implemented, since such impacts should not be attributed to the proposed project.
- Consultation, on the foregoing identification and analysis, with the official(s) with jurisdiction over the Section 4(f) property.

Section 4(f) Resources

For the purposes of this Section 4(f) evaluation, a study area of 1,000 feet from any proposed project feature was used to evaluate the potential for Section 4(f) use. Table D-1 lists the Section 4(f) resources (parks and recreational resources) that are in the study area and potential for use under Section 4(f). Section 3.18, Parkland and Open Space, of the EIS provides information on the parks in the study areas for each build alternative. No designated wildlife and waterfowl refuges exist in the study areas.

Table D-1. Section 4(f) Resources

Facility	Ownership	Size	Recreational Attributes	Potential Use
Lynnwood Alternative				
Interurban Trail	The affected portion of the trail is managed by City of Lynnwood	15.1 miles	Paved trail, separated from motorized traffic Features: Some benches line the trail though not in the project vicinity	*Temporary Occupancy* not resulting in Section 4(f) use
Scriber Creek Park	City of Lynnwood	3.8 acres	Neighborhood park Features: Scriber Creek, forested wetlands, wildlife viewing, walking trails, access to Scriber Creek Trail, benches, picnic tables	No Section 4(f) use
Scriber Creek Trail	City of Lynnwood	1.5 miles	Local trail. Soft-surface pedestrian trail along Scriber Creek. Features: 8-foot-wide combination soft-surface and asphalt trail. Wildlife viewing. Connections to the Interurban Trail.	No Section 4(f) use

Facility	Ownership	Size	Recreational Attributes	Potential Use
BNSF Alternative and BNSF Modified Alternative				
None				
SR 520 Alternative				
Viewpoint Park	City of Bellevue	24 acres	Neighborhood park Features: Open space, benches, scenic views, and hiking trail.	No Section 4(f) use

Section 3.17, Historic and Archaeological Resources and Appendix E.4 detail the proposed project's potential impacts on historic and archaeological resources. Based on this review, FTA determined that no historic properties on or eligible for listing in the NRHP are located in the Area of Potential Effect (APE) for the project. The Washington Department of Archaeology and Historic Preservation (DAHP) concurred with this determination on August 22, 2013. No further analysis of historic and archaeological resources for the purpose of Section 4(f) is required.

Potential Use of Section 4(f) Resources

While Scriber Creek Park, Scriber Creek Trail, and Viewpoint Park are located close to two of the alternatives (Lynnwood Alternative and SR 520 Alternative), no temporary occupancy or use would result from the proposed project for the following reasons:

- No land from these resources would be permanently incorporated into the proposed project.
- No construction activities or equipment would occupy any portion of land from these resources during any point of construction; therefore, no temporary occupancy would occur.

Proximity impacts (e.g., noise) of the project, both during construction and operation, would not substantially interfere with the use and enjoyment of these resources. Scriber Creek Park is considered a noise-sensitive use under FTA noise criteria. A noise analysis was conducted that determined that noise generated by the Lynnwood Alternative would be below the FTA criteria for a moderate noise impact. Therefore, noise generated by the Lynnwood Alternative at Scriber Creek Park would not interfere with the use and enjoyment of the park.

The only potential for a Section 4(f) use involves the Interurban Trail, which would be affected by Lynnwood Alternative, Design Options C1, C2, and C3. Under the Lynnwood Alternative, an elevated lead track would cross over the Interurban Trail near 52nd Street under Design Options C1 and C2, and approximately 820 feet east of 52nd Street under Design Option C3. Design Options C1 and C2 are similar in their design in this area, consisting of a single track extending from the southwest corner of the Lynnwood Alternative site. Design Option C3 proposes two lead tracks from the southern midpoint of the Lynnwood Alternative site to the parcel opposite the trail along 48th Avenue W. Figure D-1 depicts the project design features in relation to the Interurban Trail.

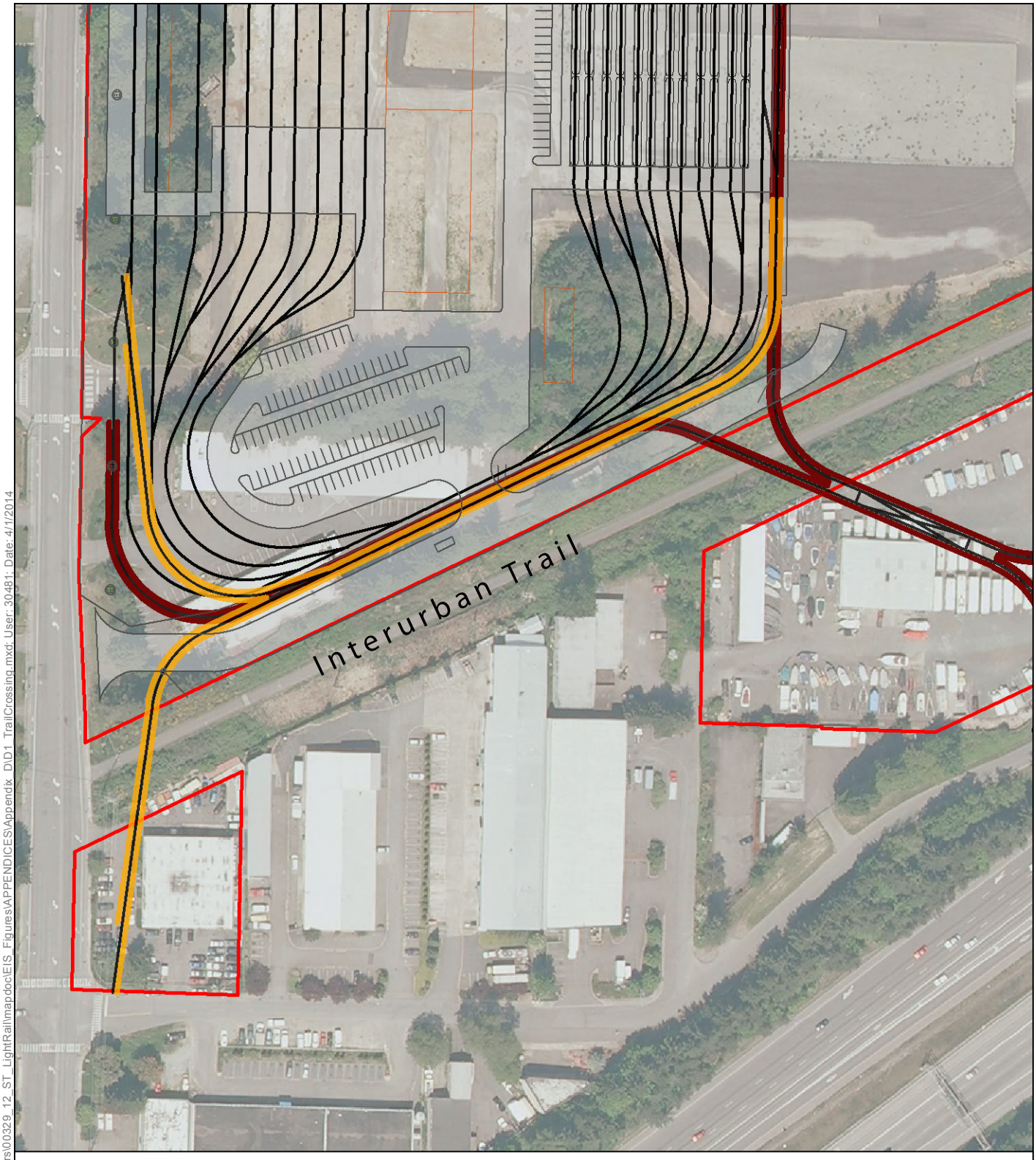

Figure D-1: Lynnwood Alternative—Interurban Trail
Sound Transit Link Light Rail OMSF Draft EIS

Potential for Permanent Use—Interurban Trail

Under the Lynnwood Alternative (all design options), no permanent use of the Interurban Trail would occur as no land from the trail would be permanently incorporated into the project. The elevated guideway would require air rights, but no physical property would be acquired. USDOT's Section 4(f) policy paper (Federal Highway Administration 2012) distinguishes the need for air rights from the acquisition of land, and states that there is no use as long as the aerial structure does not adversely affect the resource.

Potential for Constructive Use—Interurban Trail

While operation of the Lynnwood Alternative would result in a permanent structure over the Interurban Trail which would have some visual effects on the trail users' experience, these proximity impacts would be experienced for a brief duration during any given user's trip along the trail. The OMSF would create shading and alter views for part of the trail, but the change in the view for this section of the 15-mile trail would not adversely affect the active recreational and trail travel activities that are essential to the trail's purpose. Further, the primary purpose of the Interurban Trail is recreational travel (e.g., walking, bicycling, jogging, and skating). Generally, visual impacts would not be substantial or interfere with such activities and would pose only a minor annoyance for the trail user. In addition, this particular stretch of the Interurban Trail is surrounded by various transportation facilities (i.e., Lynnwood Transit Center, I-5, 46th Avenue W Viaduct over the Interurban Trail approximately 1,200 feet to the east of the Lynnwood Alternative site) and other urban development; therefore, the presence of the OMSF near a short portion of the trail would not be a notable change in the trail's character. For these reasons, no constructive use would occur.

Potential for Temporary Occupancy—Interurban Trail

Construction activities for the Lynnwood Alternative would require temporary occupancy of portions of the Interurban Trail in order to construct the lead track and conduct construction work on the Lynnwood Alternative site. As defined in 23 CFR 774.13(d), an exception to the requirement for Section 4(f) approval is granted for temporary occupancy when the following conditions are satisfied.

1. Duration must be temporary i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
2. Scope of the work must be minor, i.e., both the nature and magnitude of the changes to the Section 4(f) property are minimal;
3. There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;
4. The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and
5. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

The following discussion evaluates how the project meets the above stated conditions for an exception to the requirement for Section 4(f) approval for temporary occupancy.

1. **Duration.** Work required to construct the lead track would be temporary, lasting a short number of days relative to the entire project construction. Construction of a light rail guideway span over the trail may require the trail to be closed and rerouted for approximately up to 3 weeks.
2. **Scope of the Work.** The work would be minor in scope, and would not result in a permanent effect to the Interurban Trail such as damage to the trail pavement.
3. **Effects on the Resource.** Because portions of the Interurban Trail would be occupied by construction equipment and workers, and construction work surrounding the trail may have pose safety concerns, a temporary detour of the trail would be required to allow for the continued recreational use of the trail during construction.
4. **Restoration.** Vegetation surrounding the Interurban Trail would be replaced and generally restored to its preconstruction conditions.
5. **Consultation.** Sound Transit would consult with the City of Lynnwood regarding the temporary occupancy of the Interurban Trail. Written concurrence of the above findings from the officials with jurisdiction over the Interurban Trail would be needed prior to approval of the proposed project. FTA would need written concurrence from the City of Lynnwood before it could apply the Section 4(f) temporary occupancy exception.

The temporary occupancy posed under the Lynnwood Alternative (all design options) would not constitute a use under Section 4(f) as construction work would be temporary and shorter than the overall construction phase. To mitigate the construction period closure of the Interurban Trail, Sound Transit would coordinate with the City of Lynnwood to develop a detour and provide signage and notices to users to allow for continued use of the trail and prevent interference with its activities or purpose. The trail would be restored to its current conditions following construction work and replacement landscaping would also be provided where vegetated areas need to be cleared for construction. With these measures in place, Sound Transit anticipates the short-term construction impacts would qualify for a Section 4(f) exception for temporary occupancy, and no Section 4(f) use would occur. The City of Lynnwood, which has jurisdiction over the trail as a recreational resource, would need to agree in writing.

References

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